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TEACHER AND STUDENT BELIEFS: A CASE STUDY OF A HIGH SCHOOL
PHYSICAL EDUCATION CLASS

A Dissertation Presented

by

FRANCES J. PARKER

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

September 1996

Education

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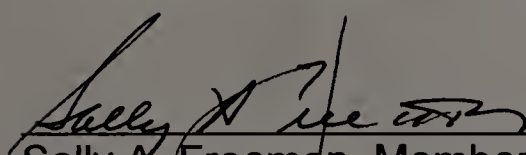
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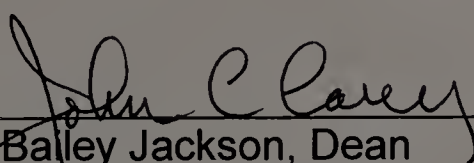
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DEDICATION

In memory of my father, Derek Parker.

March 13, 1927 - July 6, 1995

I miss you Dad.

ACKNOWLEDGMENTS

A dissertation is not a solo effort. While my name alone appears on the title page, many people contributed to the completion of this document. I would like to express my appreciation to the people in my life who helped me through this process.

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And finally, my participants who gave their time to help me understand their beliefs about physical education. Without them, this study would not exist.

Thank you.

ABSTRACT

TEACHER AND STUDENT BELIEFS: A CASE STUDY OF A HIGH SCHOOL PHYSICAL EDUCATION CLASS

SEPTEMBER 1996

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This study examined teacher and student beliefs about physical education by addressing the following questions (a) what beliefs about physical education do the teacher and students bring with them to class? (b) are there differences between the beliefs held by the teacher and those held by the students? and (c) what role does context play in facilitating or inhibiting the translation of these beliefs into action?

Participants in this case study were one high school physical education teacher and twelve students from the same physical education class.

Methodology included qualitative field notes taken during observations of two activity units (volleyball and team handball), five interviews with the teacher, four interviews with each student, and administration of the repertory grid. Data were analyzed concurrently using constant comparison to identify common themes.

Throughout the study data were returned to the participants for their responses.

The teacher's beliefs formed an intricate, multi-dimensional system with the core belief that, "physical education should provide an equitable environment

for all students.” Secondary level beliefs included for example, “the teacher is responsible for creating a safe atmosphere,” and, “physical education should be recreational.” The two student belief systems were, “gym class is not important now or in the future,” and “it’s really important to have friends in gym class.”

There were five key differences between teacher and student beliefs focused on the following issues, (a) the importance of physical education, (b) whether it should be mandatory, (c) the definition of learning, (d) the importance of equity, and (e) the role of the teacher. Although the teacher and students held very different beliefs about physical education, they co-existed in the same class by manipulating the context to facilitate the translation of their beliefs into action.

While the teacher acted on her beliefs, she never explained them in class and the students left this program with no understanding of how the teacher viewed physical education or why she believed it to be important. Instead, students’ beliefs were strongly influenced by other contextual factors and they embraced the marginal status of physical education promoted by parents, administrators, and teachers.

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CHAPTER I

INTRODUCTION

Introduction and Statement of the Problem

Beliefs, a simple seven-letter word representing a complex, powerful, construct. Frequently used, yet rarely defined, beliefs have become the focus of an increasing amount of research. In education, researchers have begun to explore the powerful nature of preservice and inservice teachers' beliefs about teaching and learning. More recently, there has been a growth in the number of investigations concerned with identifying the beliefs held by students in the public schools.

The problems associated with research on beliefs are numerous and reflect the complexity of the construct. First, beliefs are difficult to define and consequently, researchers have habitually interchanged a variety of terms including attitudes, values, theories, perceptions, and knowledge, all under the rubric of 'beliefs'. The result is a body of literature characterized by inconsistencies and confusion which, with occasional exception, serves only to perpetuate the 'non-definitional tradition' associated with research on beliefs.

Second, beliefs are hard to access. Participants may be (a) unaware of their beliefs; (b) conscious of, but unable to articulate their beliefs; or (c)

reluctant to reveal their beliefs. As a result, beliefs are often inferred from action. There is, however, a danger in making such inferences. Action is bound by context and certain contexts may be limiting physically (e.g., inadequate facilities), psychologically, socially, or culturally (e.g., pressure to conform), and hence prevent an individual from enacting their beliefs.

To me, the study of beliefs should extend beyond offering a potential explanation for actions. Beliefs form a powerful filter through which experiences pass (Pajares, 1992). This filter is self-protecting and screens out conflicting information, discarding it as inconsequential or irrelevant. Further, it is strong enough to remain impenetrable unless repeated and consistent break-through attempts are made. The real value of investigating beliefs, therefore, lies in the possibility of unveiling the core beliefs which form the filter.

In the area of beliefs, research in physical education has followed a pattern similar to that of other subject matter areas with regard to the variety of terms used to describe beliefs and the populations investigated. Researchers are beginning to explore preservice teachers' beliefs about specific aspects of physical education such as misbehavior (Fernandez-Balboa, 1991), purpose (Doolittle, Dodds, & Placek, 1993), control (Schempp, 1986), and knowledge (Graber, 1993). Research on the beliefs of inservice teachers in physical education is also increasing. Veal (1992) examined physical education teachers' beliefs about assessment, while Schempp (1993) conducted a case study of one physical education teacher which disclosed beliefs about teaching. Other studies have focused on teachers' beliefs about curriculum (e.g., Boggess, 1986;

Ennis, Ross, & Chen, 1992; Wang, 1977), purposes of physical education (Roberts, 1990), and the workplace (O'Sullivan, 1994). Studies focusing on the beliefs of students, however, are rare (e.g., Carlson, 1994; Hutchinson, 1990; Pissanos & Allison, 1993).

The recent increase in studies dealing with beliefs indicates that physical educators are beginning to acknowledge their importance. There is, however, a gap in the literature on beliefs in physical education. The key players in a physical education class are the teacher and the students, but to date only one study has been conducted which examines a physical education class from the perspective of both the teacher and students (Wang, 1977). If beliefs are as powerful as previous research suggests (Lortie, 1975; Pajares, 1992) we need to investigate the beliefs the teacher and students hold about physical education and how those beliefs are translated into action within the class setting.

Purpose of the Study

This dissertation took the form of an in-depth case study of a high school physical education teacher and twelve students in one physical education class. The purpose of this case study was to identify and compare the teacher's and students' beliefs about physical education. Further, this study explored how these beliefs were translated into action in the physical education setting. The latter is based on the assumption that beliefs influence action. Although other theories about the relationship between beliefs and action have been suggested (Fullan, 1985; Guskey, 1986), in this study beliefs were viewed as the powerful determinant of action (Deford, 1985; Harvey, 1986).

Research Questions

The questions used to guide this study were (a) what beliefs about physical education do the teacher and students bring with them to class? (b) are there differences between the beliefs held by the teacher and those held by the students? and (c) what role does context play in facilitating or inhibiting the translation of these beliefs into action?

Definition of Terms

Beliefs

It is rare to find a study in which there is an internally consistent definition of the term 'beliefs'. For the purpose of this study, beliefs were defined as internalized representations of the truth to the believer. They are open to dispute, usually contain images of an ideal situation, and rely heavily on an affective component (Abelson, 1979; Pajares, 1992). Beliefs are highly resistant to change and serve as a filter through which other experiences must pass (Lortie, 1975; Pajares, 1992). Beliefs help individuals to understand their world and tend to persevere even when contradictory evidence is presented (Nisbett & Ross, 1980; Peterman, 1991).

Core Beliefs

This definition is based on the assumption that beliefs are organized in systems. Core beliefs form the center of a belief system. They are the most powerful beliefs and exert a strong influence over other beliefs within the system. Core beliefs are the most resistant to change because they are incorporated into the system at an early stage (Nisbett & Ross, 1980; Rokeach, 1968). Refer to

Chapter II for a more detailed exploration of the literature concerned with defining beliefs.

Beliefs About Physical Education

For the purpose of this study, physical education refers to the experiences contained within a particular high school class devoted to the study of physical activity and movement skills. Beliefs about physical education may include but not be solely confined to class content, the students, teaching, and the teacher. This definition is only a general guideline to delineate the parameters of this study. It is deliberately broad and all-encompassing as beliefs by their nature are unbounded and often overlap (Abelson, 1979). For example, beliefs about sport may be strongly linked with beliefs about physical education, or beliefs about parenting may influence beliefs about teaching. Initially limiting the field of study to a specific aspect of physical education may serve only to exclude some beliefs which on the surface seem peripheral, yet which could lead to core beliefs.

Importance of the Study

This study contributes to several areas of current educational research. First, it adds to the body of knowledge concerning the beliefs physical education teachers hold about their subject. Second, it offers information with regard to what students believe about physical education. In recent studies, teachers indicated that students are one of the greatest influences on their teaching (Metz, 1993; Pinkham, 1994). The views of students who play this vital role in education, however, frequently have been omitted from educational research

(Smith, 1991). Although researchers are gradually beginning to investigate students' views, we still know very little about the beliefs they bring with them to class.

Third, this study contributes to the socialization literature. The beliefs held by high school students may be the ones they will take with them when they leave school. Perhaps they are the beliefs the students will pass on to their children about the value of physical education in schools, or the beliefs they hold about lifetime physical activity. These students are the future parents, administrators, and policy makers who will have the power to make influential decisions affecting physical education in schools. Their current beliefs about physical education are critical to the future of the subject as they may determine, for example, how the students as adults will vote on the allocation of funding and other resources.

Fourth, and finally, by examining the beliefs of a teacher and students in the same physical education class, this study fills a gap in the physical education research literature. It provides a greater understanding of how the beliefs of the teacher and students are compromised, supported, or negotiated within the context of one particular class.

CHAPTER II

LITERATURE REVIEW

This chapter is divided into three main sections. The first develops a definition of beliefs, while the second section illustrates how beliefs relate to action. In the final section, the definition of beliefs is used as a framework to consider previous research on the educational beliefs of students (K-12) and inservice teachers.

Beliefs Defined

Beliefs have become the focus of an increasing amount of educational research. While studies vary according to purpose, methodology, and participants, the majority have one feature in common--rarely is the term 'beliefs' defined. Accordingly, the first task of this chapter is to establish an internally consistent working definition of beliefs.

The different disciplines from which researchers approach their work (e.g., anthropology, sociology, psychology) are partially responsible for the lack of a consistent definition of the term beliefs. From an anthropological perspective, Black (1973) offered a broad definition of beliefs as "unseen/emotional activity" (p. 511). Sociologists such as Rokeach (1968) and Berger and Luckmann

(1967) referred to beliefs as ideology--individuals' social construction of reality within society.

Kelly (1955) approached the definition of beliefs from a psychological point of view in which individuals assign representations to real world people, objects, or events. The representation holds enough significance and validity to be used as a guide for further thought or action. Abelson (1979) used his grounding in cognitive science to define beliefs as "a network of interrelated concepts and propositions at varying levels of generality" (p. 356). Green (1971) and Fenstermacher (1986) took a philosophical vantage point and defined beliefs in terms of the relationship among things which are accepted as truths.

Irrespective of the research tradition from which the definitions are derived, consensus on one key aspect is apparent: beliefs are internalized representations of the truth for the believer. But is this definition enough? I argue that it is not, and that this broad, somewhat vague representation of beliefs is partially responsible for the confusion in the literature. A variety of terms have been used interchangeably in previous research. Attitudes, values, perceptions, knowledge, perspectives, theories... the list is almost endless, and each can be described as a internalized representation of the truth.

The remainder of this section focuses on the characteristics of beliefs and how they are organized. It is based on the assumption that beliefs are structured in systems linked together by some form of relationship defined by the believer. The systems are interconnected and it is difficult to determine where one ends and another begins.

Of the researchers who have tried to define beliefs, several approached the issue by offering a definition of a belief system. In 1986, Harvey defined a belief system as a, "set of conceptual representations which signify to its holder a reality or given state of affairs of sufficient validity, truth and/or trustworthiness to warrant reliance upon it as a guide to personal thought and action" (p. 660). Again, this definition refers to internalized representations of the truth without providing any detailed description of a belief system.

Abelson (1979) used his expertise in artificial intelligence as a foundation to address the characteristics which differentiate belief systems from knowledge systems. His work was taken by Nespor (1984, 1987) and Pajares (1992) as a framework for understanding teachers' beliefs, and it will form the basis for this review.

First, beliefs systems are open to dispute (non-consensual). This statement can be interpreted on three different levels. On the first level, the belief system as a whole may differ depending upon the individual believer's perspective. For example, as a physical education teacher I may have a highly structured belief system about my subject which revolves around student learning. As a classroom teacher, my beliefs about physical education center around it being an outlet for my students to expend energy. In contrast, a student may have a belief system about physical education which is primarily concerned with having fun in the lesson. Each of these belief systems is an internalized representation of the truth for the individual from their perspective of physical education.

On a second level, the nature of the individual beliefs themselves must be explored. For example, a teacher may believe she should get to know her students and understand their problems. On the other hand, she may also believe there should be a certain distance between students and teacher. These two beliefs, although part of the same belief system, are somewhat in opposition, as it is difficult to understand students without becoming involved.

On a third level, an individual may hold two belief systems which seem to be in conflict. Sigel (1985) suggests that we deal with such dissonance by creating "overarching principles" to separate the conflicting systems, or internal arguments designed to avoid or deny any contradictions. Although not necessarily related to teaching, an example is a person who has a strong religious belief system which may conflict with a belief system focusing on scientific principles. The believer may argue that systems are not in conflict because by contributing to the understanding of humanity, both systems have the same core purpose.

Second, belief systems frequently contain images of the ideal situation which differ significantly from reality--the world as it is and the world as it should be. One ideal in physical education may be that the curriculum should be individualized and cater to the needs of each student. In reality, however, this individualization may not be possible due to factors such as inadequate facilities or large classes. Perhaps, therefore, context plays a role in this second characteristic of belief systems. The teacher has to determine which beliefs are

connected to reality within the specific context of the class, compromising her/his ideals in order to survive in the school.

The third feature of belief systems is their reliance on affective and evaluative components. Abelson (1979) divides this characteristic into two aspects, cognitive and motivational. He maintains that the concepts in a belief system are themselves cognitively defined as being good or bad and that these polarities have a powerful impact on the organization of other concepts in the system. Cognitive definition can be illustrated with a simple example: for the teacher who believes in individualized instruction, large classes are bad and adequate equipment is good. Such bipolarization may influence how other components of the belief system are organized around the particular central belief.

Abelson referred to motivation by saying that the affect with which input is received into a belief system (e.g., excitement, fear) will be a strong determinant of the manner in which it is processed. A teacher who is really excited about a new idea to which she has just been exposed in a staff development program will put more time and energy into implementing that idea than a teacher who feels skeptical about how the idea will affect her classes.

Fourth, the elements contained within the belief system are open and not governed by specific boundaries. For example, in my search for students' beliefs about physical education, I may find that these are influenced by their beliefs about sport.

According to Abelson, another feature of belief systems is the notion of varying 'certitude'. From reading the article, I would substitute the word 'passion' for certitude. A person can believe passionately in one point of view but then regard another proposition with a certain amount of indifference. For example, a physical education teacher may believe passionately that all students should be treated equitably in class, whereas the belief that the curriculum should be individualized does not evoke the same emotion.

Sixth, and finally, belief systems often are formed as a result of personal experiences which tend to serve as a subjective form of proof that each belief is actually valid. For example, a teacher who provides extensive instruction to a low-skilled student who has experienced little success in physical education observed the student improve. Such personal experience may reinforce the teacher's belief that all students can learn.

The discussion of beliefs and belief systems leads to the question: Are the characteristics of beliefs the same as those of belief systems? To me, the two sets of characteristics are synonymous with one exception: belief systems are unbounded, beliefs are not. Consider the following belief: All students can learn. That is the belief stated in its bounded entirety; there is nothing else to add. The belief system of which it is a part, however, is a different consideration. This particular belief may be connected to many others relating to teaching, parenting, and society. In this respect, the belief system is unbounded, while the belief itself is not.

To summarize, on a general level, beliefs are internalized representations of the truth to the believer. More specifically, beliefs are organized into systems which are open to dispute on three different levels, frequently contain an ideal image, and rely heavily on affective and evaluative components. Further, belief systems often are formed as the result of personal experiences and are unbounded in nature.

In contrast with the work on the characteristics of beliefs and systems, other researchers have focused on the organizational attributes. In 1968 Rokeach discussed a belief system and the beliefs contained within it based on three key assumptions: there is a central-peripheral continuum within the belief system and beliefs vary along this line; beliefs differ in both power and intensity; and the closer to the center a belief is situated, the more powerful it is. He defines centrality in terms of how much a certain belief influences or is connected with other beliefs. In physical education, a teacher's core (or central) belief may be that every student can learn, and this influences all the other beliefs within the system.

Peterman (1991) further explored the notion of centrality and indicated that the core beliefs are most resistant to change. Nisbett and Ross (1980) refer to this concept as the "perseverance phenomenon." They argue that experiences help to form beliefs, and the earlier the beliefs are incorporated into a belief system, the more they resist change.

Ingenuous strategies are employed by believers in order to preserve the structure of their belief system, especially the core belief. The individual will use

whatever manipulative means are necessary to discredit evidence that is contrary to the beliefs held. Such manipulation may be conscious or unconscious, and can also be used to distort events in the memory by recalling only aspects of the event which support the existing beliefs. Beliefs, therefore, act as a powerful filter through which new information must pass.

Posner, Strike, Hewson, and Gertzog (1982) drew on the work of Piaget to explain how changes in the structure of belief systems are achieved and they identified two strategies: assimilation and accommodation. Assimilation is the process by which new information is incorporated into the existing belief system. Accommodation occurs when the new information cannot be assimilated and the beliefs themselves have to change.

On the surface this seems to contradict the perseverance phenomenon (Nisbett & Ross, 1980), but Posner et al. (1982) acknowledged that accommodation really is the last resort and they discussed four conditions which must be in place before accommodation can occur: awareness that the new information represents a conflict with existing beliefs, the belief that the new information should be reconciled with the existing beliefs, the desire to reduce the conflict and inconsistencies among their beliefs, and the belief that assimilation was not successful. Changing beliefs, therefore, seems to be a complicated process. It is little wonder that beliefs continue to exist even when they are no longer accurate representations of reality.

I currently see beliefs as a spider's web. The web in its entirety represents a belief system. The outreaching strands may later form a network of

other webs or be used to enlarge the current one and therefore represent the concept of unboundedness.

The center of the web is the core belief which serves to organize the structure of the system. The spider always returns to the center before spinning another section. The individual strands which emanate from the center are the beliefs which make up the system and these are connected by several different threads. Sometimes there is a hole where a connection has not been made or tangled threads where the beliefs may be conflicting.

One web may consist only of a few strands, another may be intricately woven, and yet another may be so well established that it appears to be a solid film. Just as each web has certain identifying characteristics, so does each belief system. I know a spider's web when I see one, but they are so individual that a precise definition is difficult to pinpoint. Accordingly, perhaps one of the most poignant messages was captured by Pajares (1992) when he quoted Hunter Lewis, "In the world of human thought...the most fruitful concepts are those to which it is impossible to attach a well-defined meaning" (p. 308).

I cannot specifically define beliefs, or belief systems, but I can offer a list of features to help me recognize their existence:

The beliefs an individual holds are internalized
representations of the truth which act as experientially
developed filters through which information must pass.

Consequently, any conflicting information may be discarded
in protection of existing beliefs. Beliefs rely heavily on an

affective or evaluative component and are held with varying degrees of passion. Beliefs are organized into personally meaningful systems which are unbounded in nature.

Centrally located (core) beliefs are most powerful and more difficult to change.

Beliefs and Action

As previously mentioned, I think the study of beliefs should extend beyond offering a potential explanation for action. Frequently however, one of the main justifications for studying beliefs is that they do hold the key to action.

Consequently, this section examines the relationship between beliefs and action.

There is much debate in the literature about the relationship between beliefs and action. Do beliefs influence action (Deford, 1985; Harvey, 1986; Richardson, Anders, Tidwell & Lloyd, 1991) or do actions influence beliefs (Fullan, 1985; Guskey, 1986)? For me, the key to the relationship between beliefs and action is the power each has to influence the other. In my opinion, beliefs are the most powerful and hence most influential because of their stability and resistance to change.

To establish a model for examining the relationship between beliefs and action, I drew primarily on the work of Sigel (1985). According to Sigel (1985), when exploring the beliefs-action relationship, there are two types of beliefs to consider, specific and global. Some beliefs contain specific references to behavior and can be used to predict action. For example, I believe students learn best when provided with positive feedback. This belief directly refers to

action, and we can predict that a teacher who holds this belief will give positive feedback to students. Other beliefs are more global and contain an option for expression. For example, I believe students learn through guided discovery. This belief refers to action, but offers no indication as to a specific behavior, as the action is more abstract.

In examining the relationship between parental beliefs and behavior, Sigel (1985) indicated that we should look at beliefs about what and beliefs about how. He suggests that beliefs containing a specific expression of behavior are beliefs about what (e.g., the belief about positive feedback). Beliefs which are more global need further exploration. On their own, they reveal little about behavior, but with further probing the beliefs-action relationship may become clear. For example, there are many ways of encouraging guided discovery, so to make a stronger link with action, we need to examine how the teacher facilitates this particular style.

I agree with Sigel's idea of beliefs about what and how, but argue that irrespective of whether the belief is global or specific, we must always probe further to understand the relationship between beliefs and action. For example, the belief about positive feedback may enable us to predict that a teacher will use positive feedback in the classroom, but it tells us nothing of the type, frequency or quality of that feedback.

Although a belief may contain a reference to behavior, Sigel (1985) indicates that intention, value, and attitude may determine whether the belief is actually translated into action. An individual must intend to act upon a particular

belief. Such intention, however, is affected by the anticipated consequences and the reactions of others. For example, a teacher who believes that all students should be treated equitably and structures her lessons accordingly may experience resistance from the students. If the students in a basketball lesson are not familiar with a style of teaching in which practices and drills ensure equal access to the ball, they may be reluctant to participate or create discipline problems.

Closely related to intention is the value an individual places on a belief and its importance in her/his teaching goals. If the belief described above is not important in the goals of that particular teacher, and she does not place a high value on the equitable treatment of students in comparison with other beliefs, perhaps the resulting discipline problems will deter her from acting upon her belief. Alternatively, if the teacher places a high value on this belief, she will act on it and then create strategies to address the consequences. In this case, the use of the word value is synonymous with passion or certitude as described earlier.

Sigel differentiates between beliefs and attitudes by portraying beliefs as a cognitive construct while attitudes refers to feelings. In light of the characteristics of beliefs provided earlier, however, I would like to offer a slightly different interpretation. Attitudes are part of beliefs. As previously stated, all beliefs have a strong affective or evaluative component, and attitude toward an object, event, or person, therefore, draws upon the evaluative component of all the related beliefs.

To me, however, there is another component in the relationship between beliefs and action--context. According to Nespor (1985a), "context, however it is conceptualized, is fundamentally important to the interpretation and explanation of teachers' beliefs, and to any attempt to link those beliefs to action" (p. 105). It is, therefore, impossible to understand beliefs if context is not taken into consideration.

Context is richly layered and includes characteristics of the school setting, the community, society as a whole, the individual classroom, and the students (Goodlad, Soder, & Sirotnik, 1990). All these factors affect the teacher and may physically or psychologically facilitate or inhibit the translation of beliefs into action (Ennis et al., 1992; McNeil, 1986; Nespor, 1984; O'Loughlin, 1989). The influence of context, however, depends upon the individual teacher. For example, minimal facilities and large numbers of students may pressure teachers to develop a highly regimented, routinized style of teaching. If teachers believe in this autocratic style of teaching they will not feel constrained by the context of the situation. If, however, the teachers believe in a more constructivist approach to teaching, this context will inhibit the translation of their beliefs into practice. Figure 1 offers a diagrammatical representation of the relationship between beliefs and action within any given context.

To summarize, the complex relationship between beliefs and action has been the focus of much debate. The model I have presented is based on the assumption that beliefs, both specific and global, are powerful determinants of action within the situational context. The extent to which action is influenced by

beliefs, therefore, depends upon the two key components of value (passion or certitude) and attitude (affective and evaluative) in combination with the intention to act within a particular context.

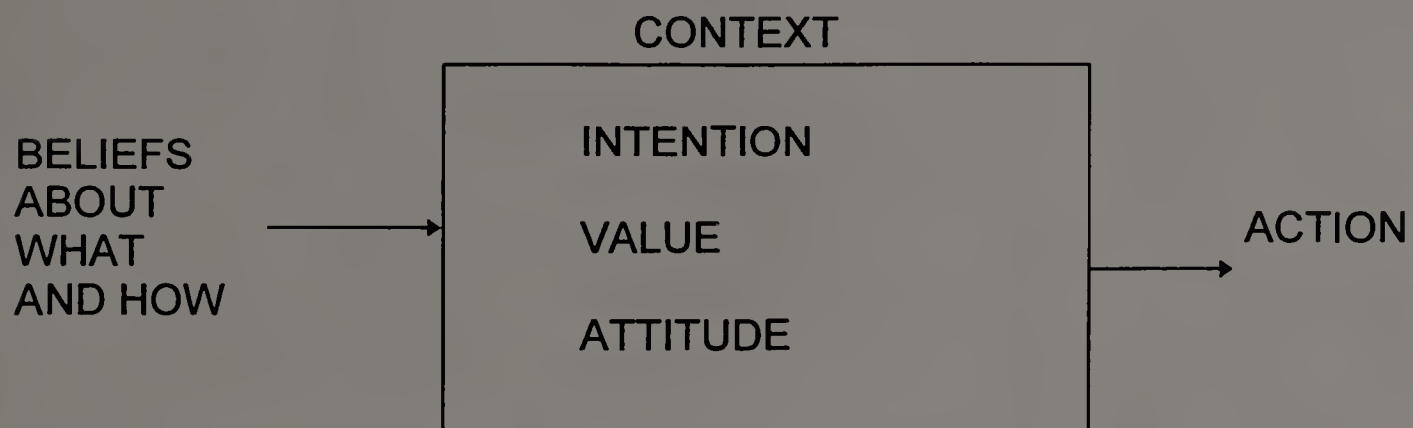


Figure 1. Relationship between beliefs and action
(Adapted from Sigel, 1985)

Research on the Relationship between Beliefs and Action

Studies which focus on the relationship between beliefs and action have revealed inconsistent results. Deford (1985) conducted a study of the teaching of reading and discovered links between observed classroom practices and the teachers' theoretical orientation to reading. Similarly, Richardson et al. (1991) interviewed and observed 39 teachers and found that most related their teaching practices to their own personal beliefs. In the same study, the researchers conducted an in-depth examination of one teacher whose beliefs were not reflected in her practice and implied that she was in the process of changing her beliefs.

Other researchers, however, found that beliefs were only partially reflected, or not reflected at all, in the practices of teachers. In a study of teachers' beliefs about the purposes of physical education at the elementary

level, Roberts (1990) found that the practices of two of the five participants did not consistently reflect their beliefs. Bauch (1984) found that the only behavior related to beliefs about participation and control was the way in which the teachers grouped the students. Neither Duffy (1981) nor Hoffman and Kugle (1982) found any relationship between teachers' theoretical orientations about reading and their teaching practices.

Perhaps one explanation for the inconsistent results is the influence of context. In an investigation of teachers' beliefs and practice, Nespor (1984, 1985a, 1985b) found that teaching practices were influenced by the interaction of school context with the teachers' beliefs. Raymond (1994) conducted a study to identify factors which influence the consistency between beliefs and practice of mathematics teachers. She found that students were the major influence on the teachers' practices and teachers adapted their practices according to the beliefs, behavior, and abilities of their students. Similarly, Wang (1977) conducted an ethnographic study in physical education and once again found that students were a strong but subtle influence in the class. The teacher structured a curriculum which emphasized self-worth, cooperation, and equity, while the students imposed their own hidden curriculum focusing on segregation, discrimination, and imbalances of power. Wang suggested that the students' agenda reflects the context of society as a whole which was transferred into the physical education class.

In summary, previous research examining the relationship between beliefs and actions of teachers has revealed varying results. Some teachers

translated their beliefs into practice, others did not, and yet others did, but inconsistently. One explanation for such variety is the context of each teaching situation. The contextual factors affecting some classrooms facilitated the transfer of beliefs into practice while others inhibited this relationship or did not allow teachers to consistently act upon their beliefs.

Research on Beliefs

The remainder of this chapter is devoted to an exploration of previous studies which have examined beliefs in the field of education. My search of the literature was complicated by the common use of a multitude of terms to describe beliefs including perspectives, values, conceptions and theories. With that in mind, I referred to the list of belief characteristics identified in the first section of this chapter in an attempt to match them with the results of the studies. Although this method provided a starting point, it was not entirely satisfactory as some characteristics were difficult to determine based on the information offered in some investigations. Accordingly, the rationale for including certain studies in this review are explained in each of the following sections.

I divided the studies reviewed into two categories according to their primary focus: students in the public schools or inservice teachers. I chose to delineate these groups as they represent the main areas of the literature to which I see this study contributing.

Educational Beliefs Held by Students in Public Schools

Students have been the silent majority in physical education research, and while "none of us can be children again...we can take children's experience seriously and learn from it" (Barritt, Beekman, Bleeker, & Mulderij, 1983, p. 141). The value of understanding students' experiences and thoughts during the learning process has been echoed by researchers concerned with creating a place for student voices in educational research (Beekman, 1983; Erickson & Shultz, 1992; Griffey, 1991; Lippitz, 1986; Smith, 1991; Solomon & Boone, 1993; Van Manen, 1991). In a recent address at the annual meeting of the American Educational Research Association (1994), Martinek implored researchers in physical education to focus their attention on the lives, experiences, and beliefs of students. A review of the educational literature which focuses on the beliefs of students in this subject area reinforced the timeliness and relevance of Martinek's comments.

Due to the absence of studies specifically addressing students' beliefs in physical education, I broadened my search to include investigations which focused on students' attitudes (Carlson, 1994; Luke & Cope, 1994; Rice, 1988; Tannehill, Romar, O'Sullivan, England, & Rosenberg, 1994; Tannehill & Zakrajsek, 1993), perspectives (Hutchinson, 1990), perceptions (Ennis, 1985), constructs (Pissanos & Allison, 1993), and views (Ratliffe, Imwold, & Conkell, 1994). Ennis and her colleagues (1992) explored students' understanding of their teacher's learning goals, while Kollen (1981) examined the meaning students make of movement. Although none of these authors examined beliefs

per se, when the studies are reviewed in combination they serve to provide a comprehensive understanding of how students view physical education.

A search of the literature on students' beliefs in other subject matter areas was more fruitful. For example, students' beliefs have been explored in the fields of mathematics (Littlefield, 1993; Witherspoon, 1993), literature (Rogers, 1991), homework (Sullivan, 1988), science (Ryan & Aikenhead, 1992), and class management (Birmingham, 1984; Goss, 1985).

This review is divided into four categories: the role of prior beliefs; beliefs about education, learning, and knowledge; beliefs about personal relationships within the context of education; and beliefs about sport and physical education. The first three categories combine the research in physical education and other subject areas to provide an understanding of the educational beliefs students hold. The fourth category focuses primarily on the literature specific to physical education. The categories are as broad and unbounded as the structure of belief systems themselves, and the beliefs in one category may well influence beliefs in another.

The Role of Prior Beliefs

In physical education, investigations have not addressed the role of students' prior beliefs. While they are mentioned in other subject matter areas, few studies were specifically designed to examine the powerful nature of students' prior beliefs and their impact on learning (e.g., Mtetwa & Garofolo 1989; Ryan & Aikenhead, 1992; Schauble, 1990). The results of these studies

support the premise that even in young children, beliefs are persistent and resist change.

Ryan and Aikenhead (1992) explored how students view the world of the scientist by using an instrument designed to reveal students' definitions, assumptions, values, and conceptions about science. They discovered that students hold inaccurate and inappropriate images of science which contribute to their resistance to science as a school subject.

In a non-data-based article, Mtetwa and Garofolo (1989) examined a set of five 'unhealthy' mathematical beliefs commonly held by students. The authors indicated that these beliefs created difficulties in student learning by presenting barriers, often unarticulated, for teachers to break through. Interestingly, although this article focused on the beliefs of students, once again their voices were silent. The authors did not indicate to whom the beliefs belonged, as they were 'generic' and not attributed to particular students.

The strong influence of prior beliefs on learning was further reinforced in a study by Schauble (1990). Children were asked to plan and execute experiments to examine the relationship between speed and design features of computer simulated racing cars. The children favored their initial beliefs throughout the battery of experiments, and evidence contrary to these beliefs was frequently misrepresented and misunderstood.

Beliefs About Education, Learning and Knowledge

While the previous investigations emphasize the important role of prior beliefs in student learning, the following are examples of studies which focus on

identifying students' beliefs about education, knowledge and their own learning process. Based on the premise that through their extensive experience in education students will construct their own implicit theories and beliefs about schooling, Davidson (1986), Schommer (1993), and Ainley (1993) explored students' beliefs about the broader aspects of education. The findings of these studies are of interest on two levels, first for the content of the actual beliefs, and second because the construction of beliefs seems to change with age.

Davidson (1986) interviewed students (grades 3-12) to examine their beliefs about the process of learning, what should be taught in schools, the nature of intelligence, and the definition and purpose of education. The results indicated that the construction of beliefs changed as the students progressed through the school system. For example, the belief that learners are active participants rather than passive recipients increased with age, as did an appreciation for the non-traditional school subjects such as art and music. By contrast, however, the older and younger students believed more strongly in the intrinsic value of education, whereas for students in the middle grades learning was essentially the application of effort.

Schommer (1993) explored the development of students' epistemological beliefs and also found that they change in relation to age. She divided beliefs about knowledge and learning into four categories: simple knowledge, certain knowledge, innate ability, and quick learning. She found that believing in simple, certain, and quick learning decreased from the freshman year in high school and students became more concerned with learning for understanding. This relates

to the belief espoused by 11th grade students in a study by Ainley (1993), that the purpose of learning is to gain understanding.

These results indicate a link (not necessarily linear) between age and beliefs which questions the static nature of beliefs referred to earlier. One explanation may be that because of their youth, children's beliefs have been incorporated into their belief system fairly recently and are, therefore, less resistant to change. The studies included in this review, however, were not longitudinal, and such data are needed to provide a greater understanding of belief development in students.

In physical education, students' beliefs about learning were addressed from two different perspectives--what is learned, and how learning is accomplished. High school students who intend to pursue a career in physical education highlighted fun, sports skills, social skills, and fitness as the four main areas of learning in physical education (Hutchinson, 1990). Interestingly, students who did not wish to teach physical education also referred to these learning domains, although social skills were the most important (Parker, 1994b).

Ennis and her colleagues (1992) found that students' responses to questions about their learning in physical education were related to the value orientation held by their teacher. Value orientations are defined as "belief structures or philosophical positions that can be operationally defined in educational settings" (1992, p. 38). Students whose teachers had a disciplinary mastery/learning process goal orientation gave more concrete descriptions of learning relating to the content goals articulated by their teacher. In weight

training, for example, these goals included learning about different muscles, body parts, and correct use of weights. By contrast, students whose teachers exhibited an ecological integration/social reconstruction value orientation had difficulty expressing their ideas about learning.

Similarly, Stinson (1993) also found that in dance classes students' reflections on their learning differed according to their teacher. Some spoke of learning about dance or were unclear as to what they had learned. Students in other classes were articulate about their learning which focused on movement, choreography, and dance appreciation. The fact that teachers seem to influence students' understanding and articulation of learning in physical education again suggests the need for investigations which compare the beliefs of teachers with those of their students within the context of the gymnasium.

With regard to the process of learning in physical education, effort and participation are the two key determining factors. Students who wanted to teach physical education as a career indicated that everyone can perform sporting skills successfully, providing they try hard, with little or no instructional input from the teacher (Hutchinson, 1990). Further, they agreed with students in other studies who equated learning with participation (e.g., Carlson, 1994) and as with the students surveyed by Rice (1988), they would grade primarily on participation. There is little evidence in the current literature to support the idea that students view the learning process in physical education as anything other than participation, and some students do not even expect learning to occur (Carlson, 1994).

Beliefs About Personal Relationships Within the Context of Education

In several studies, students expressed beliefs about personal relationships that occur within the context of education. The focus of these relationships was the teacher, teacher-student interaction, and peer communication.

According to some students, the teacher is the most important influence in physical education. Pissanos and Allison (1993) grounded their study in constructivist learning theory and used reminiscence to encourage high school students to construct meaning of their elementary physical education experiences. The teacher was the key factor; "in the minds of the students, their teacher was elementary physical education" (p. 429). The participants in Carlson's (1994) study also indicated that the teacher was the most influential factor in physical education, while other students referred to the importance of the teacher as a good example and role model (Luke & Cope, 1994; Rice, 1988).

In physical education, if the teacher is so important and yet learning is not expected or teacher-facilitated, what role do students think the teacher ought to have? One interpretation might be that the role of the teacher takes on a different dimension as more of a supervisor, organizer, and director (Hutchinson, 1990). This is supported by Schempp (1993) who indicated that "teacher as personality and manager was more highly valued by the students than teacher as pedagogue or intellectual" (p. 15). As the students in Hutchinson's study intend to become physical education teachers, this thought is worrying, because

it represents the perpetuation of the custodial orientation to teaching (Lawson, 1983; Templin, 1981).

Closely linked with the importance of the teacher is the influence of the teacher-student relationship. Participants in a study by Stinson (1993) indicated that they needed to feel cared for by their teacher and that the student-teacher relationship should be warm and understanding. In a review of previous literature, Aicinena (1991) further highlighted the significance of a positive teacher-student relationship. While these results identify beliefs about the relationship between teacher and students which focus on the positive affective aspects, a study by Goss (1985) provided a different perspective. She investigated students' beliefs about class management and found that nurturance was the key teacher behavior which conveyed authority rather than warmth.

Students also consider peer relationships and teamwork to be important (Tannehill et al, 1994; Tannehill & Zakrajsek, 1993). In physical education more than any other subject, students are asked to cooperate and work together as teams; as K. G. said, "your work is to cooperate with other people, to work together in a group and to talk" (Stinson, 1993, p. 224). These sentiments were also echoed by other students who indicated that interaction with peers is the most important aspect of physical education because, "that's what you have to do for the rest of your life" (Parker, 1994b).

Peer relationships rather than particular activities or tasks were sometimes the root of good or bad feelings in physical education (Ratliffe et al.,

1994). Students preferred to choose their own partners to work with and discussed their frustration when matched with a partner who did not follow directions.

A slightly different role of peer relationships is found in a survey of 11th and 12th graders designed to elicit their beliefs about teachers and teaching as a career (Education Standards Commission, 1985). The students indicated that through peer relationships they noticed a lack of interest in learning by their classmates, which would discourage them from choosing teaching as a career. Not only do students believe in the importance of peer interactions in the present class situation, it seems they also reflect on them when making career choices.

Beliefs About Sport and Physical Education: Purpose, Success, and Satisfaction

While the other sections of this review have combined literature from a variety of subject matter areas, this section only addresses students' beliefs about physical education and sport. Several investigators asked students about the purpose of physical education. The majority of middle and high school students indicated that above all else, the purpose of physical education was to have fun (Carlson, 1994; Hutchinson, 1990). Ennis (1985) found that joy of movement was one of the most meaningful purposes of physical education for middle school students. Fun and enjoyment was also one of the most important affective outcomes of physical education cited by students in grades 6-12 (Tannehill et al., 1994; Tannehill & Zakrajsek, 1993).

Third grade students in a study by Ratliffe et al. (1994) responded to the question: Why have physical education? in very concrete terms. To them,

physical education was for building muscles and becoming healthy and strong. As with the older students, little mention was made of learning and physical education was seen almost as recess, a break from the regular school day (Carlson, 1994; Hutchinson, 1990; Parker, 1994b).

While the main purpose of physical education was to have fun, students expected few challenges or goals and did not value physical education in school (Carlson, 1994). A similar image was described by Kollen (1981) who explored the meaning high school students make of physical education as a movement experience. She discovered that while students sought and valued the experience of movement itself, the physical education environment was not conducive to 'being-into-movement'. Rather, students felt physical education was essentially a meaningless experience in which movement became boring, and they merely completed assigned tasks.

Some researchers explored students' beliefs about the importance of physical education in relation to other school subjects. Fifty percent of high school students in a study by Tannehill et al. (1994) rated physical education as less important than any other school subject. Similarly, Parker (1994b) found that while students enjoyed physical education, they did not see it contributing to their future career prospects and, therefore, it was not highly valued.

Perhaps, as Stinson (1993) suggests, students have been socialized in the belief that schooling is a means to an end. The essential purpose of education is preparation for a career, and as few intend to teach physical education its relevance as a school subject is minimalized. Sadly, the 'means to

an end' phenomenon is also applicable to those students who do intend to teach physical education, as they view teaching the subject as a career contingency for coaching (Hutchinson, 1990).

At this point, however, it is interesting to reflect back to the study by Davidson (1986) who found that students' appreciation for non-academic subjects increased with age. Although physical education was included in his study, unlike music and art it did not rise in status as the students progressed through school. While few students may aspire to become artists or musicians, they still learn to appreciate these subjects. In this particular study, the same was not true of physical education. In the literature then, while physical education was an important escape to help students cope with the rest of their day, it was never seen as important in its own right and sometimes provided a context which was not conducive to meaningful movement experiences.

If students do not expect learning to occur in physical education, or equate learning solely with participation, how do they view success in physical education? Duda and Nicholls (1992) conducted a study in which they examined the relationship between students' beliefs about success in schooling and sport. While I acknowledge the differences between physical education and sport, their strong relationship was discussed by participants in studies by Hutchinson (1990) and Carlson (1994), indicating that belief comparisons seem appropriate. (It is interesting that physical education is often discussed in terms of its relationship to both recess and sport which are two very different domains of activity.)

In Duda and Nicholl's (1992) study, the students believed that success is caused by four main factors: deception (pretense, cheating), motivation/effort (working hard, improving), ability (innate talent, better at tests or competition), and external factors (luck, teacher expectations). These factors were similar for both success in the classroom and in sport. Further, the students believed their sources of satisfaction in sport were interest, fun, involvement, enjoyment, and that 'time flies'! Again, these findings were similar to their beliefs about satisfaction in classrooms.

The major role played by fun, effort, and participation echoes the findings of studies in physical education discussed earlier and supports the argument that if learning is equated with participation, and the students participate, then they are successful. A similar rationale can be made for effort and fun. On a broader level, however, these findings raise an interesting question with regard to the relationships among physical education, recess, sport, and schoolwork. These four domains seem to differ in purpose and content, but yet students' beliefs indicate there are strong links which need to be investigated further.

To summarize, the literature reviewed in this section addressed a variety of students' beliefs ranging from global aspects of education to more subject specific constructs. Beliefs about learning, knowledge, education, personal relationships, physical education, and sport were explored. The results were at times contradictory, and serve to highlight the complex nature of beliefs. The absence of studies examining students' beliefs about physical education underscores the need for research in this area, especially if the beliefs of their

teacher are also investigated. Such research must be conducted with student populations varying in age, socio-economic class, ability, and gender before we can truly identify and understand students' educational beliefs.

Beliefs Held by Inservice Teachers

The literature on the beliefs of inservice teachers can be divided into three main categories; literature reviews, beliefs into practice, and the identification of beliefs. The reviews (e.g., Kagan, 1990, 1992; Pajares, 1992) tend to examine the importance of studying teachers' beliefs, their implications for teacher education, and the characteristics of beliefs, while little is mentioned about the actual beliefs held by teachers. The studies which examined the relationship between beliefs and practice (e.g., Deford, 1985; Richardson et al, 1991; Roberts, 1990) have been discussed in an earlier section of this chapter.

In the third category of studies, once again a variety of terms was used to describe teachers' beliefs. Investigations explored a wide range of topics including assessment and grading (Matanin & Tannehill, 1994; Veal, 1992), motivation (Nolen & Nicholls, 1994), goals for student learning (Ennis et al., 1992; Swafford & Blackmon, 1993), and purposes (Roberts, 1990). I have tried to highlight common themes and relate inservice teachers' beliefs to those of students previously identified.

Beliefs About Learning and Teaching

Some teachers believe that students learn through participating in activity. For example, a case study of an experienced science teacher revealed her belief that "through activity, students learn" (Peterman, 1991, p. 8). Prawat (1992),

however, maintains that student activity is not a measure of educational value and describes this belief as "naive constructivism" (p. 357), an argument also made by Dewey (1938) decades ago. Despite such debate, the belief that activity equals learning remains prevalent when referring to both students and teachers (Kagan, 1993). In a study by Schempp (1993), Steve, a veteran physical education teacher, indicated that experience is the primary source of knowledge. He believes this about his own teaching and also transferred this belief to his student teachers who were in school "to learn what they could by being in front of the students" (p. 13).

While activity and experience often are equated with learning, teachers' believe their role is to give information which the students receive (Olson, 1981). This 'absorptionist' view which defines teaching as transmission (Cohen, 1988; Pope & Scott, 1984) was also identified by Peterman (1991) and Thompson (1984). In physical education, a series of studies by Ennis and her colleagues (Ennis & Hooper, 1988; Ennis & Zhu, 1991; Ennis et al., 1992) used value orientations as a framework for studying teachers and students. They found that teachers with a disciplinary mastery/learning process orientation focused on teacher directed learning, and students could pursue their own goals only when the objectives of the teacher had been accomplished.

If teachers are the providers of knowledge, it follows that there is only one way of knowing--the teacher's. Goodlad (1984) visited over 1,000 classrooms and discovered that the teacher's way of knowing was the only one permitted. In physical education, this point is illustrated by Steve who says, "It's my way or the

highway" (Schempp, 1993, p. 6). These autocratic beliefs about teaching and learning further reinforce the dominance of the custodial orientation in teaching (Lawson, 1983; Templin, 1981).

The teachers' beliefs about learning and teaching reveal an apparent contradiction. While teachers tend to equate activity and experience with learning, they also view themselves as providers of knowledge. Surely by 'giving' the students knowledge, the teacher denies them the chance to construct their own meanings from experiential learning situations.

Beliefs About the Goals of Learning and Teaching

The previous section examined teachers' beliefs about how students learn and the role of the teacher in the learning process. While many of the beliefs discussed are teacher centered and control based, teachers hold a contradictory set of humanistic beliefs about the goals of teaching and learning which link closely to students' beliefs about the importance of cooperation, relationships, and teamwork (Ratliffe et al, 1994; Stinson, 1993).

Some teachers believe in social interaction as a way of learning (Bussis, Chittenden, & Amarel, 1976), and others believe that promoting cooperation will increase student motivation (Nolen & Nicholls, 1994). Building self esteem, social skills, and personality were described as the goals of student learning by high school teachers Laura and Jim (Kagan, 1993), while Ms. Marsh, a middle school history teacher, said that the ultimate goal of teaching was to build character (Nespor, 1985b).

High school teachers revealed that the primary purpose of physical education was to expose students to lifetime skills, with a secondary goal being to develop responsible citizens (Stroot, Collier, O'Sullivan, & England, 1994). The social aspects of teaching and learning, including cooperation, teamwork, and involvement were also emphasized by teachers who exhibited an ecological integration/social reconstruction value orientation (Ennis, 1994; Ennis et al., 1992).

Teachers in a study by Roberts (1990) described social development as one of the primary purposes of physical education, and more experienced teachers expressed beliefs about curriculum which included the development of self-esteem and self-image (Boggess, 1986). Similarly, the teacher in a study by Wang (1977) structured his curriculum to focus on cooperation, self-worth, and integrated living.

Comparing the beliefs about nature of teaching and learning with beliefs about the goals of teaching and learning reveals an interesting conflict. The teachers described teaching and learning in very autocratic terms and yet they expressed humanistic goals for students. Perhaps, as some researchers suggest, the context of schools encourages the perpetuation of an autocratic teaching style, and teachers who align themselves more with constructivism have to compromise their beliefs in order to survive in schools (Ennis et al., 1992; McNeil, 1986).

Beliefs About Assessment and Grading

If teachers have humanistic goals for students, how does teaching in an autocratic environment affect the way they grade students? A middle school history teacher stated her preference for non-grading, but indicated this was not an option in the school in which she taught (Nespor, 1985b). The teachers in a study by Matanin and Tannehill (1994) believed that keeping students active in physical education was more important than assessing progress. They also believed students should be individually assessed and equated such assessment with skill tests. Interestingly, the teachers did not believe skill tests to be a good measure of learning. In the reality of the teaching situation, however, these teachers rarely mentioned the importance of knowledge and skills, emphasizing instead active participation and correct attire as grade determinants. Dress and participation were also emphasized by teachers with an ecological integration/social reconstruction value orientation (Ennis et al., 1992).

Veal (1992) found that teachers believed grades should be objective and reflect skill, effort, and participation. Again, in reality, grades were often based solely on participation, reflecting the students' belief that physical education should be graded on participation (Carlson, 1994; Hutchinson, 1990). With regard to assessment and evaluation, therefore, perhaps the context of the teaching situation to a large extent determines the grading system employed by teachers.

Beliefs about students

An examination of teachers' educational beliefs would be incomplete without reference to their beliefs about students. Students are one of the greatest influences on teachers (Metz, 1993), and in several studies teachers indicated that they compromise their instructional goals in order to gain compliance from the students (O'Sullivan, Siedentop, & Tannehill, 1994; Pinkham, 1994; Powell, Farrar, & Cohen, 1985; Schempp, 1993).

Although students are very influential in the classroom, few researchers have investigated what teachers believe about students. Boggess (1986) found that physical education teachers' beliefs about students developed with teaching experience, shifting from beliefs about how students affect them to beliefs about the students themselves. First year teachers' beliefs focused on the students as trouble makers, while second year teachers indicated that students need to learn responsibility.

More experienced teachers expressed positive beliefs about students. They believed students to be perceptive, challenging, and self-motivated (Boggess, 1986). Teachers in a study by Parker (1994a) believed students are sensitive individuals with different abilities and needs. They should treat each other and the teacher with respect, and are responsible for their own learning, behavior, and choices. By contrast however, Steve, an experienced physical education teacher, believed that students do not come to class wanting to learn. He also differentiated students by gender, believing that boys were more athletically inclined than girls (Schempp, 1993).

Few studies specifically addressed teachers' beliefs about students, and no dominant pattern can be identified. Perhaps the diverse results reflect experience or particular teaching situations, but further research must be conducted in this area before more concrete conclusions can be drawn.

To conclude, from reviewing the literature addressing the beliefs of students and inservice teachers, several connections can be made. First, both groups equated activity or practice with learning. Second, cooperation and communication were important to students and teachers. Third, inservice teachers hold both humanistic and autocratic beliefs about teaching and learning which reflect the complexities of teaching and perhaps the influence of context. Fourth, both students and teachers refer to a grading system based primarily on participation rather than knowledge and skills. Fifth, and finally, the beliefs expressed by students indicate a conceptual relationship between recess, sport, physical education, and schoolwork that must be investigated further.

Summary

The purpose of this chapter was to provide an overview of three areas of literature concerned with beliefs. First, I explored the definitional literature and offered a list of characteristics to help me identify beliefs. The focus of the second section was the relationship between beliefs and action and included a model adapted from Sigel (1985) for exploring how beliefs influence action within a specific context. Finally, I reviewed the literature addressing the beliefs of students and inservice teachers. These bodies of literature have served as a starting point to develop my study which addressed a gap in the research in

physical education by investigating the beliefs of a teacher and her students and the role context plays in the translation of these beliefs into action.

CHAPTER III

METHODS AND PROCEDURES

Introduction

The purposes of this study were (a) to identify the beliefs of a high school physical education teacher and a number of students in one class, (b) to compare the beliefs of the teacher with those of the students, and (c) to explore how the beliefs of the participants (teacher and students) were translated into action within the context of the class. The investigation took the form of a case study, and this chapter describes the case study design and the procedures followed. It is divided into eight sections: case study design, site selection, gaining access, the student recruitment process, data collection, trustworthiness of data, data analysis, and pilot work.

Case Study Design

The case study is a research design described by Shaw (1978) as a, "problem centered, small scale, entrepreneurial endeavor" (p. 2). It is an intensive investigation of a particular phenomenon which focuses on explanation, understanding, and thick description. According to Guba and Lincoln (1981) the term "thick description" refers not only to a detailed picture of the situation, but also, "interpreting the meaning of... demographic and

descriptive data in terms of cultural norms... community values, deep seated attitudes and notions" (p. 119).

The case study uses multiple data sources and relies on inductive reasoning, so the interpretations which develop from the data are grounded within the context of the case. According to Merriam (1988), the case study is "a design particularly suited to situations where it is impossible to separate the phenomenon's variables from their context" (p. 10).

The importance of context in the study of beliefs has been documented by several researchers (e.g., Ennis et al., 1992; Nespor, 1984, 1985a). Further, to understand the beliefs of a teacher and students in a high school physical education class, an in-depth investigation using several methods of data collection is needed. Given these criterion, a case study research design as defined by Merriam (1984) seems most appropriate for this particular investigation.

Site Selection

In an ideal situation, the site selected would have been one in which the students had physical education with the same teacher for a minimum of 20 consecutive classes. After a preliminary survey of schools within reasonable traveling distance, I discovered, however, that the high school physical education programs were structured on an elective basis. The students chose their activities at the beginning of each unit so there was no guarantee that the same students would be together for two consecutive units. Taking this constraint into consideration, I approached a school which seemed to have the least amount of

activity options from which the students could choose, thereby increasing the possibility of the students remaining together for two units.

To accommodate the time frame of this study, another criterion for site selection was that the physical education class must meet at least twice a week. Further, one physical education teacher and 15 students in the same class had to be willing to participate.

Gaining Entry

When I had identified a potential site (Colonial High School), I contacted one of the physical education teachers, explained the study, and asked if she was interested in participating. Ms. Jackson asked for a short written summary of the proposed study and upon reading it she indicated her willingness to take part. I then asked for a meeting with Ms. Jackson and the principal. The primary purpose of this meeting would have been to explain the study to the principal, with the support of the teacher, and request permission to talk to students about participating. As the principal was just beginning his first semester at the school, however, Ms. Jackson felt that an internal request (i.e., one initiated by a teacher) was more likely to be accepted. Ms. Jackson took a copy of the proposal to the principal who approved the study and requested an opportunity to meet with me. In our brief meeting, I explained the study and gave the principal a packet of information including copies of the informed consents for the students. The principal indicated that I would not have to approach the superintendent or school committee prior to beginning the study and gave me permission to recruit students.

Student Recruitment Process

As I reflect upon the proposal I wrote for this study, the section which described the student recruitment process was two short paragraphs which were preceded by the heading "participant selection." The length of the section speaks to the relative simplicity with which I viewed the selection process, while the heading itself indicates the assumption that I would have participants to choose from--the reality of the situation was very different.

As a full time graduate student I was an outsider at Colonial High School. The students had no personal relationship with me, no investment in my future, and no real desire to accept me into their school life. Yet I needed students from the same class to give their time and energy to my dissertation. I wanted to observe the students for two units in physical education and interview them four times during their study halls. The timeline for the study was six months and in addition to the observations, the total interview time commitment for each student was three hours.

It was beyond the scope of this study to include all the students in a particular class, but I needed a minimum of 10 students and a maximum of 15. I was interested in studying physical education at the high school level, and in particular 10th-12th grade. We need to understand what these students believe about physical education, as their beliefs are likely to remain unchanged throughout their lifetime unless a major influential event occurs (Nisbett & Ross, 1980; Sheehy, 1993). Further, 10th-12th graders may be more articulate than younger students in discussing their beliefs about physical education. They

have participated in physical education since elementary school and have more personal experiences on which to draw.

Having obtained an informed consent (Appendix A) from Ms. Jackson, she and I discussed the recruitment process. We decided that I should initially approach four classes of students, a total of 120 students in grades 10-12. At Colonial High School 8th and 9th graders are taught together, as are students in grades 10-12. The classes were selected primarily for scheduling purposes as they only had two activities from which to choose when they elected their units, and so there was a greater chance of the same students staying together. At this point, I also decided to explain to the students that in order to participate in this study they had to agree to stay together as a cohort group for two consecutive units in physical education.

I spoke with the first class at the end of a physical education lesson. I was introduced by Ms. Jackson who was enthusiastic about the study and explained how she saw it as being beneficial to the students and the physical education program. She then left the gym so I could talk to the students alone and explain the study in greater detail. There were approximately 30 students sitting on the bleachers as I outlined the study, why I wanted them to participate, and what their responsibilities would be. At the end, I passed out copies of the informed consent (Appendix A) which contained a detailed description of the study and the role of the students. The consent forms needed to be signed by a parent or guardian, so I indicated that I would return the following day to collect the completed forms. I repeated this process with another class and returned to

the school daily to collect completed consent forms. After a full week, only three students had agreed to participate.

When I reflected upon the recruitment process, there were several possible reasons for the lack of interest on the part of the students. First, I spoke with the students during the first period of the school day which is often not the best time to stimulate interest and enthusiasm. Second, in one of the classes I approached, homeroom had been extended to accommodate the mandatory completion of a survey. Consequently physical education class time had been reduced and the students were not happy that they had to change for class, let alone listen to a stranger ask for their help in a study. Third, I wondered if the enthusiasm with which the teacher described the study and her involvement in it may have been detrimental rather than advantageous. To this point I really had no way of knowing the relationship Ms. Jackson had with her students, and I had assumed it to be positive. Finally, I wondered if addressing the students in a large group was the most effective way of recruiting. Because I had spoken with so many I could not recognize all of them in the hallways to prompt them for their informed consent. Also in a larger group it is much easier not to listen and to be reticent about asking questions.

My next step was to take a more personal approach with the remaining two classes. I began by watching several lessons in soccer and archery, chatting with students who were not participating, learning the names of students in the classes, and taking notes to help me connect faces with names. For the actual recruitment process I talked with students individually or in small groups

as they sat on the bleachers having just signed up for a new unit. At Colonial High School, the activity units are five weeks in length and sign-ups take the entire class period prior to the beginning of the new unit.

I approached the students who had just signed up for volleyball, the activity being taught by Ms. Jackson. Again, I explained the study, asked if they wanted to participate and handed out informed consents. I also requested their home telephone numbers so I could call and remind them to return the consent forms. The students were more willing to ask questions about the study and by the end of the sign-up lesson, 16 had agreed to participate. They had also agreed to stay together as a group for the next activity unit. I followed up with telephone calls that evening and all the students confirmed that the consent forms had been signed and they wanted to take part. I was convinced that I finally had the number of participants needed to begin collecting data, yet when I returned to the school the following day, all but two students had changed their minds.

Frustrated, and having exhausted my participant pool, I considered finding another site but was worried that the same problems might occur. I therefore decided to go back to the students one last time, not to ask them to change their minds, but to ask for advice. I was curious to know why they had chosen to withdraw from the study so I could design a different approach to recruit students at another school. I expected the students to be reluctant to discuss their reasons for withdrawing but was surprised by their reactions. When I mentioned that I would have to move to another school, the students were concerned that

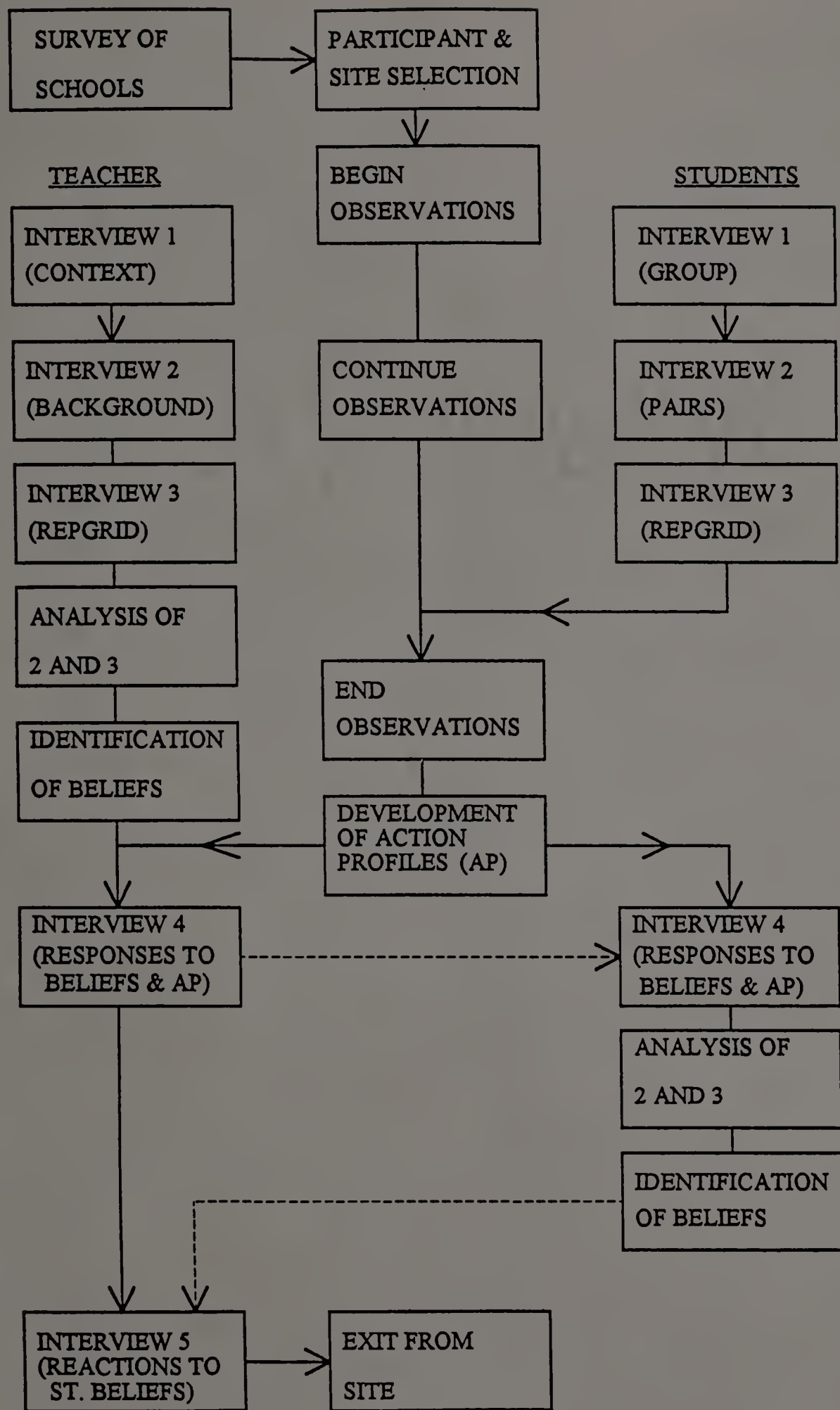
there was something wrong with their own school. I explained that Colonial High School was my ideal site but I just did not have enough students to conduct my study. School loyalty played a role at this point, and by the end of the study hall period all but one student had agreed to participate. I collected some completed consent forms that day and by the end of the week I had 15 students in the study.

Data Collection

The primary sources of data in this study were observations and interviews. Figure 2 provides a diagrammatic overview of the data collection procedures. In the following sections, which explain in detail the focus of the observations and interviews, "participants" refers to the teacher and the students unless otherwise stated.

Observations

I observed 20 physical education lessons covering two units (volleyball and team handball) which provided the opportunity to observe the teacher and students over an extended period of time in a variety of situations. As a non-participant observer my task was to watch each of the participants and record their actions and words in the form of field notes. I developed an observation form (Appendix B) on which I hand wrote details of the lesson as they occurred. After each observation I set up a tape recorder in my car, and on my drive back from the school I recounted the lesson and any other additional information. The tapes served as a record of my immediate reaction to the class, students, teacher, and setting. Upon returning home, I re-read the field notes and listened



----- Indicates when the data from the teacher provide the focus for the next student interview and vice versa

Figure 2. An overview of data collection procedures

to the tape to assist me in developing a more detailed type written account of the observation.

As initially there were 16 participants (the teacher and 15 students), watching each participant in every lesson was an overwhelming task. Instead, therefore, I watched half the participants in one class, and the other half in the following class. The teacher, however, was included in each rotation, and observed every lesson.

I used a time interval system of observation whereby one participant was observed for two minutes before rotating to the next. After the first class I created a rotation schedule to ensure that each student was observed the same number of times. The schedule included alternates in case a particular student was absent on their observation day.

To assist in remembering to switch my observations to the next participant, I wore headphones and listened to a tape containing beeps at two minute intervals. I found this system to be both distracting and limiting. I was self-conscious of wearing headphones, limited in my movement around the gym, unable to interact with students when necessary, and unable to hear what the participants were saying. After the first two lessons, therefore, I switched systems relying instead on a wrist watch with a two minute timing function. At the end of two minutes, the watch would beep, reminding me to begin observing the next participant in the rotation.

The purpose of the observations was to develop an action profile for each of the participants. The profile was compiled from all the field notes taken during

observations and contained a description of the behavior patterns for the individual. The profile was returned to the participant in the fourth interview for their responses and reactions.

Interviews

In addition to the observations, this study involved five interviews with the teacher and four with each of the students.

Interview 1 (Teacher)

To gain an in-depth understanding of how context facilitates or inhibits the translation of beliefs into action, this audiotaped interview focused on questions about the context of the school and community (Appendix C). The teacher's responses also helped me to understand more about the environment in which I would be working. This interview included a tour of the physical education facilities.

Interview 1 (Students)

The first interview with the students took the form of a group meeting at the beginning of the semester and served two main purposes: to obtain information about schedules, home addresses, and preferred interview pairs; and to elicit elements to be used in the students' repertory grid (interview 3). I had intended that all 15 students would meet together for this interview, but only nine were in school on that day. The remaining six were interviewed a few days later and the same procedure was followed.

The students each completed a schedule of their classes and other responsibilities (e.g., clubs, sports practices) and wrote out their home address.

I also asked the students to choose a pseudonym by which they would like to be known throughout this study. As the second interview was to be conducted with pairs of students, I wanted them to have some choice in their interview partner. At this initial meeting, therefore, I asked students to write down the names of three people with whom they would like to be interviewed. With these pieces of information I arranged an interview schedule.

The second purpose of this interview was to elicit from the students a list of elements to be used in the repertory grid which formed the focus of the third interview. I asked the students to think about the characteristics which make a physical education lesson and write down as many as they could on an index card. I used this method to reduce the possibility of peer pressure to respond to the task in a certain manner. I collected all the index cards and transferred the information onto large sheets of poster paper. As a group, I then asked the students to reduce the list to six or eight characteristics which would form the elements for the repertory grid. The characteristics were reduced by eliminating repetition and combining similar items. Due to the nature of this interview in which all data were recorded on poster paper or index cards, the students were not audiotaped.

Interview 2 - Background Information

The second interview was not conducted until after 10 classes had been observed. Such timing of the interview allowed both the teacher and students to become comfortable with my presence, and enabled me to detect any behavior changes which occurred as a result of the interviews discussing beliefs about

physical education. The focus of the interviews differed for the teacher and the students (see Appendix D for interview guides.) The students were interviewed in pairs with the exception of one student who did not want to be audiotaped and I interviewed her alone so I could take detailed notes. All other interviews were audiotaped.

The second interview focused on obtaining background information about the participants and their experiences in physical education. It provided the opportunity for me to understand some of their history in physical education and served also as a chance to get to know them. At the end of the interview with the teacher I also asked her to list the characteristics of a physical education class which were used in the repertory grid at a later date.

Interview 3 - Repertory Grid

The repertory grid formed the focus of the third interview. The repertory grid (REPGRID) was developed by Kelly (1955) as a means to explore a person's thoughts and feelings in a particular domain, and it is grounded in personal construct theory. The most basic assumption underlying personal construct theory is, "a person's processes are psychologically channelized by the ways in which he [sic] anticipates events" (Kelly, 1970, p. 7). Inherent in this assumption (referred to as the fundamental postulate) is that individuals are dynamic beings whose mental processes are directed through organizational networks allowing them to predict or anticipate reality. Individuals, therefore, are scientists with theories which are constantly being tested as they create meaning from the environment (Kelly, 1970).

To elaborate upon the fundamental postulate, Kelly (1970) provides a series of propositions (corollaries). For example, the 'individuality corollary' indicates that persons differ from one another in their construction of events, while the 'dichotomous corollary' describes the nature of the constructs within an individual's construction system. For an extensive explanation of personal construct theory, the reader is referred to Kelly (1955, 1970).

Less formally stated, personal construct theory assumes that each individual creates her/his own version of reality using a system of personal constructs (Kelly, 1955, 1970; Pope & Keen, 1981). The organization of these constructs and the relationships between them form a personal representational model of the world. By using this model, individuals are able to act according to their own interpretation of the situation.

The REPGRID is a tool which has been described as, "one of the best attempts to examine and bring into awareness the conceptual system built and held by an individual" (Shaw, 1980, p. 9). It enables researchers to examine how a person classifies experiences and categorizes the environment. By exploring how people construe or interpret a situation, it is possible to understand their behavior in that particular situation.

The REPGRID has been used to explore a variety of topics including teachers' beliefs (Munby, 1984; Nespor, 1985a, 1985b; Parker, 1994a), communication (Freeman, 1986), and prospective teachers' thinking (Corporaal, 1991). Although there are a variety of grids, they all have two common components--elements and constructs. Elements define the area to be

investigated (the universe of discourse) while constructs are the ways in which a person differentiates among the elements and organizes them in relation to one another (Beail, 1985; Pope & Keen, 1981).

There has been much discussion about the merits of allowing participants to select their own elements as opposed to using those created by researchers. All participants responding to the same set of elements offers the advantage of comparisons among the individual grids; the elements, however, may not be meaningful to each participant. Comparing the individual grids of the teacher and students is important in this study, but equally important is that the participants respond to elements which are meaningful. To accommodate these issues, I decided to elicit the elements from the students as a group (in the first interview). Using this method, students had input in creating the elements of the grid, and they all responded to the same elements, which still allowed for comparisons among grids. The teacher was asked to complete two grids, the first containing her own list of the characteristics which make up a physical education lesson, and the second containing the characteristics elicited from the students.

The structure of Interview Three differed slightly for the students and the teacher. To help the students understand the procedure, initially I asked them to list six of their favorite music groups and then demonstrated how to complete a grid using the groups as elements. This process allowed the students to become familiar with the REPGRID and provided an opportunity for them to voice procedural questions or concerns.

Having completed the example, I provided each student with a repertory grid containing the elements elicited during the first interview. Instructions outlining the procedure for completing the grid were displayed on a piece of poster paper for reference, and I was available to answer any questions the students had. Each student was asked to complete the grid by considering the elements in groups of three, and identifying what makes one different and the other two similar. A detailed outline of the procedures and examples of the repertory grids can be found in Appendix E.

I used a similar process to explain the repertory grid to the teacher and after the example was completed, Ms. Jackson was asked to complete two REPGRIDS. The first grid contained the characteristics of a physical education class she had previously provided, while the second grid contained the elements elicited from the students. As each grid took approximately 25 minutes to complete, this interview was conducted over two separate planning periods at school.

According to Solas (1992), the REPGRID is most effective when used in conjunction with autobiographical information about the participant. In this study, therefore, the REPGRID was combined with the information gained from the second interview to provide a more comprehensive understanding of each participant's beliefs.

Interview 4 - Phase 1: Response to Repertory Grid

There were three phases to the fourth interview, all of which were audiotaped. Phases One and Two were the same for the teacher and students.

In Phase One, each participant was given the computer analysis of the repertory grid and asked to comment on the print out.

Interview 4 - Phase 2: Response to Action Profile

Second, the participants read and responded to their action profile created from the observations made earlier in the semester (Appendix F). The focus of the third phase was dependent on whether the participant was the teacher or a student.

Interview 4 - Phase 3: Teacher Responds to Beliefs

I asked Ms. Jackson to respond to her belief statements which I had extracted from Interviews Two and Three. The statements were presented in the form of a written narrative which she read and we then discussed. This not only provided a member check for the trustworthiness of the data, but also afforded the opportunity to explore the possible origins of the beliefs.

Interview 4 - Phase 3: Students Respond to Teacher's Beliefs

Once the belief statements had been discussed with the teacher, they formed the focus of the third phase of the student interviews. I asked the students to respond to the same set of beliefs, i.e., those of their teacher. To afford the physical education teacher the same anonymity protection as the students, the beliefs were not revealed as being those of their particular teacher.

The beliefs were disguised as a statement made by a physical education teacher who was applying for a hypothetical job at their school. The students commented on whether they would hire the teacher based on her/his beliefs about physical education. This strategy had the potential to reveal information

about the relationship between teacher and students' beliefs which may not otherwise be apparent. See Appendix G for the interview protocol.

Interview 5 - Teacher Responds to the Students' Beliefs

During the summer I returned to the teacher to ask for her response to the students' beliefs about physical education. Prolonging the data collection period in this way enabled me to analyze the data from the students and also ensured that the students did not have Ms. Jackson for physical education (all but two had graduated from Colonial High School). To further reduce the risk of the identification of individual students, I assured them that their beliefs would be combined and presented to the teacher as a group and not attributed to particular individuals.

Trustworthiness of Data

Three strategies were employed to ensure trustworthiness of data. First, multiple data collection methods were used to investigate the same concept (Patton, 1990). Each method was designed to reveal a different aspect of beliefs or action, thus providing the opportunity to cross check information. As no singular method can provide a truly comprehensive understanding of a particular phenomenon, such methodological triangulation contributed to an in-depth investigation.

Second, at several times during this investigation, my interpretation of events was returned to the participants for their response (member checks). Individuals commented on the accuracy of their action profile and the teacher was presented with a list of her beliefs extracted from the data and asked for

input. This interactive structure of the study ensured that the final conclusions are accurate representations of the participants' beliefs and actions (Lincoln & Guba, 1985).

Finally, I met with two peer debriefers at various stages throughout the study. The debriefers were peers with experience in qualitative research and an interest in beliefs. Initially they questioned my assumptions and biases, and discussed methodological issues. During the closing stages of the study, one debriefer examined the complete data sets for four students and the teacher, deriving themes from the information. She and I then compared our analyses and discussed the data (Lincoln & Guba, 1985).

Data Analysis

Data collection and analysis occurred concurrently. As the data gathered from the observations and the interviews were initially reviewed, they suggested methodological adjustments and made me aware of developing themes. The purpose here was not to try to validate those themes in subsequent observations or interviews, but to look for alternative explanations or negative cases (Patton, 1990).

Following each observation, the field notes were typed up and stored in separate files for each participant. There was also a file containing the general observations made about each lesson. Upon completing the observations I used the data for each participant to develop an action profile, a description of their activity patterns in the physical education classes I observed.

The repertory grids were analyzed on two levels. First, the language used in the elements and constructs provided by the participants was examined using content analysis. This enabled me to identify any common themes apparent in the grids of the participants, thus providing a cross-case analysis. Second, the completed grids were analyzed using the computer program REPGRID. The program uses cluster analysis and principal component analysis, and I focused on the cluster analysis. According to Pope and Denicolo (1993), the cluster analysis retains all the details of the relationships between the elements and constructs. Further, it treats the rating scale as ordinal rather than interval, i.e., it assumes nothing about the absolute size of the differences between the numbers in the scale.

The REPGRID program produces three types of grid; *display*, *focus*; and *mode*. The display grid is a computerized visual representation of the raw data. To create the *focus* grid, the program re-arranges the elements and constructs from the *display* grid to ensure that those similarly viewed by the participant are located close to each other. The *mode* grid represents the constructs most frequently used by the participants and it can be represented in *display* or *focus* form. As all the students completed grids containing the same elements, it was possible to create a *mode* grid representing their responses. This grid could then be directly compared with Ms. Jackson's response to the same set of elements (the second grid she completed).

The data from the interviews was transcribed and entered into The Ethnograph software program (Seidel, 1993). The transcripts were then coded

and common themes and categories extracted. To address the purpose of this study, both individual and cross-case analyses were performed.

Pilot Study

Prior to beginning this investigation I completed a smaller version of this study. The observation period was reduced to four lessons, but one teacher and three students completed the whole data collection process. The pilot study tested the methodology and the various interview protocols and allowed me to make several adjustments to the structure of the study. Appendix H contains a detailed description of the pilot study.

CHAPTER IV

RESULTS

Introduction

The research questions used to guide this study are (a) what beliefs about physical education do the teacher and students bring with them to class? (b) are there differences between the beliefs held by the teacher and those held by the students? (c) what role does context play in facilitating or inhibiting the translation of these beliefs into action? The purpose of this chapter is to address the research questions by presenting the data collected from various sources in this study.

The role of context is important to the study of beliefs, but before contextual influences can be discussed, the context itself must be described. Consequently, the first section of this chapter contains a detailed description of the context in which the study was conducted. Sections Two and Three examine students' and teacher beliefs respectively, including contradictions and contextual influences. Section Four compares teacher and student beliefs, noting similarities and differences, and the final section in this chapter provides a summary of the results. To protect the anonymity of the participants, school, school district, and community, pseudonyms are used throughout.

Context

My intention in this section is to provide you, the reader, with a detailed description of the context in which this study was conducted. Perhaps the most effective way to convey the context is to take you with me on a visit to Colonial High School. After reading this section you should have a vivid image of the school, community, teacher, and students.

Community and School

As we drive into the small town of Braddan we pass a small liberal arts college on the left hand side of the road. Set in its own grounds, this four year college extends an impressive welcome to Braddan visitors. The college is also partially responsible for the imaginary geographical line which divides the Braddan residents by class. People who live on the "mill" side of the line are considered to be working class whereas those living on the "town" (college) side are middle class professionals.

Colonial High School is located two miles further down the road on the left hand side. We turn into the driveway, past the sign asking us to support the school teams, and then park in the staff and visitors parking lot.

The school is a single story structure with only one front entrance. The blue metal doors have two wire-meshed panes of glass in each and a small sign that informs us "school is open." Passing through the doors we can hear the band practicing in the auditorium to our right, and we find ourselves at an intersection of four corridors all of which are quiet; within moments that will change as the bell rings and students swarm to their next class. The hallway

ahead is lined with sets of gray lockers interspersed with partially hidden, closed classroom doors.

Turning left, we pass the main office. As always the digital clock is set to "Braddan Time" which is four minutes slower than the rest of the world. Phyllis, the secretary, is at her usual desk typing a memo. Sometimes she looks up and talks, most of the time she does not acknowledge my presence, and under no circumstances will she ever consider paging a student over the intercom system for me. This is her territory and I am definitely the outsider. The principal's office is directly behind Phyllis' chair and she guards that entrance fiercely.

We pass through the first set of fire doors and the long hallway ahead of us leads to the gymnasium. Student art work lines the walls of this corridor and the displays change regularly although certain pieces such as the senior project remain constant. I always gaze at the walls hoping for further insight into the students whose work is displayed, some of whom are participants in this study.

Making our way towards the gym we pass the guidance office, faculty lounge, nurse's office, and the library. As usual, the library is buzzing with murmuring students engaged in whispered conversations and homework discussions. The librarian nods a greeting as we pass--she and I have often discussed the possible whereabouts of students who have missed an interview appointment.

Another corridor opens up to our right and looks identical to the one we saw when we first entered the building. The school is built around a central square structure made up of four corridors--if we were to walk down this hallway,

we would eventually arrive back at the school entrance. The gym, however, is our destination for today so we keep walking straight ahead.

The gentleman sitting by the fire doors is on hall duty at this time every day. He once asked me for my hall pass! Since that embarrassing incident, we often exchange pleasantries (usually about the weather) before I go into the gym. Above the fire doors a hand-painted sign cries "don't hate, mediate" and reminds us to seek help, not revenge if we have a problem.

The fire doors lead to the final section of the corridor. To the left are two cafeterias where the students have study hall (at least in theory!), although many times I have searched the school for students who are supposed to be in "Cafeteria 1." Directly opposite the cafeterias are four sets of double doors which form the entrances to the gymnasium. The outer sets of doors are metal and painted blue, and they provide direct access to the lockerrooms. The blue paint outlines old black lettering which identifies the "boys' lockerroom," and "girls' lockerroom." The middle two sets of doors are dark wood with peeling varnish and dull brass handles--both doors open into the gym.

The noise coming from the gym alerts us to the fact that a class is still being taught, so while we wait for it to finish, let me tell you a little about the school. Colonial High School accommodates 775 students in grades 8 - 12 and 60 teachers are on the faculty. The student body is predominantly European American (80-85%) with the remainder being an equal split between Latino, Asian, African American, and Cambodian. The teaching staff are all Caucasian,

and in the entire school system there is not one person of color in a professional, non-professional, or administrative role.

Colonial High School has a fairly stable student population, most of whom have attended schools in the same district since they were in kindergarten. Only approximately 10% of students transfer from other systems. The school administration maintains that students are not tracked; nonetheless, students are placed in academic sections based upon their performance the previous year.

The faculty at Colonial High School are politically active and have recently been disputing the conditions of their teaching contracts. The dispute lasted over 18 months during which time the teachers worked without contracts and did not facilitate extra-curricular activities, chaperone dances, or maintain any responsibilities outside of the specified working hours. In physical education there recently was a very controversial court case about appropriate attire for participation in class.¹ The court case drew much community attention to physical education in Colonial High School and Ms. Jackson, the teacher who participated in this study, was directly involved in the legal action. Ms. Jackson won the case, although the student involved is now in the process of appealing the court's decision.

Handicap accessibility is also currently an issue for Colonial High School and the local community. The school is not accessible and the community has repeatedly voted against an override to provide more money to update its

¹ To protect the anonymity of the participants the details of the court case cannot be discussed as it is currently under appeal and has become public knowledge. I do believe, however, that the case and heated debate resulting from the court action has affected Ms. Jackson's relationship with some students.

facilities to abide by the law. Consequently, the high school faces losing its accreditation.

The administrative structure of Braddan School District mirrors that of many other districts with a school committee, superintendent, assistant superintendent, and then principals in the various schools. In addition to the new principal at Colonial High School, one vice-principal is responsible for enforcing school policies and discipline. Physical education at Colonial High School has the support of the administration, at least in writing, as the mission statement included in the faculty manual (1995) states that one of the school's educational goals is "to help each student to acquire the necessary knowledge, skills, and attitudes to maintain optimum physical fitness and sound health habits throughout life" (p. 1).

Physical Education

Facilities

The school bell rings and students begin to stream from the lockerrooms, pushing one another in the corridors as they move to their next class. The girls' lockerroom is eerily quiet as we enter--this solitude will soon be shattered by the next group of students racing to their lockers, calling for their combinations, and dropping overflowing bags onto the floor to change their clothes for "gym."

The lockerroom is tiled in mustard yellow and the lockers themselves are blue, red, or green. The facility is old, and the paint is chipped--according to the students it is also rarely cleaned and usually cold. Antiquated showers which have not been used for years stand adjacent to the lockers. A few students

choose to change in a smaller room located behind the main lockerroom. This room is structured more as a communal changing room with benches around the side and a large space in the middle.

The women's physical education office is a tiny room located at the top of short staircase in the girls' lockerroom. A small bookcase, two desks, a bag of 6 volleyballs, and a file cabinet fill the office to such an extent that there is barely room for people to stand. The office overlooks the changing area, although the teachers have strategically placed posters on the glass walls in an attempt to provide some privacy for both themselves and the students.

A door at the back of the lockerroom provides access to the main gym, a smaller gym at the rear of the building, and an outside door which then leads to the playing fields. The main gym provides two teaching stations split by a brown, wooden divider which unfolds mechanically in a concertina fashion and takes several minutes to close.

Two sets of bleachers flank the sides of the gym--these are usually pushed against the wall for physical education class, with the exception of the bottom layer where the students sit for attendance. Thin windows are set high in the walls at each end of the gym, and often become an unofficial target for students playing basketball. Other popular student-selected targets are the scoreboard and the clock, both of which are protected by a thin layer of transparent plexi-glass. The clock, of course, is set to "Braddan Time," although the students often question its accuracy, especially as the end of a lesson draws near.

All the lessons I observed (volleyball and team handball) were taught in the main gym which seems to be reserved for team sports. Individual activities such as archery and fitness are usually taught in the smaller gym.

The facilities are adequate for the number of students but dictate to a certain extent the activities included in the curriculum. According to Ms. Jackson, "the determination for what we offer at any given time depends on how we can best accommodate these students to keep them as active as possible." Consequently, the department does not offer two individual sports at the same time.

Personnel

Ms. Hopkins. Returning from our tour of the indoor facilities, we find the two female physical education teachers sitting in their cramped office waiting for the bell to ring for the next class. Ms. Hopkins is a tall athletic figure with a strong New York accent. She has taught at Colonial High School for 7 years and also coaches the girls' varsity basketball team. Following a state mandate requiring additional health classes for freshmen, her responsibilities have been divided equally between physical education and health. Prior to the mandate she was a full-time physical education teacher.

Ms. Jackson. Ms. Jackson, the teacher who participated in this study, began her teaching career 21 years ago at Colonial High School. She has short gray hair and glasses which are held together at one side with a piece of fuse wire. She teaches physical education full-time and her daily schedule includes five physical education classes, one assigned duty and one planning period.

Ms. Jackson said she has been described as a "radical, intolerant feminist," a label from which she does not shy away. Her strong views on gender equity and sexism are apparent in her classes and in her interactions with teachers, students, parents and the administration. As mentioned earlier, Ms. Jackson was involved in a court case in which her views on sexism and the oppression of women were evident. Ms. Jackson's concern for equity also led her to resign from coaching after four years because of the gender inequities she experienced with regard to facilities, equipment, and competitive opportunities. Ms. Jackson's strong views have not always made her popular, but her commitment and consistency have gained her respect.

Outside of the school environment, Ms. Jackson currently plays in a local softball league and participates in distance running events. She also works as a volunteer in a shelter for battered women.

Mr. Whitman. Mr. Whitman and Mr. Williams are the two male physical education teachers at Colonial High School. Mr. Whitman is the department head and athletic director--positions he has held concurrently for the last five years, although he has been teaching at the school for 25 years. His current part-time teaching load is four classes per week and the rest of his responsibilities are associated with athletics.

Mr. Williams. Mr. Williams is a full-time physical education teacher who has taught at Colonial High School for 21 years. In addition to his teaching responsibilities of five classes each day, he also coaches the JV football and basketball teams.

Department

Cooperation and communication among the four teachers in the physical education department seems limited. While Mr. Williams, Ms. Jackson, and Ms. Hopkins sometimes discuss particular students and activity choices for subsequent units, Mr. Whitman is not included in these conversations. It became apparent that Ms. Jackson's relationship with Mr. Whitman is marginal at best, as she views him as a less than competent department head who has undermined her authority on several occasions. Their lack of communication was exemplified by the fact that one Friday he informed her that she would be responsible for a student teacher who was to start at Colonial High School the following Monday. Prior to that point Ms. Jackson had neither requested a student teacher nor was aware that one was about to join the department.

Further support for the lack of departmental communication can be found in the area of teacher evaluation. In the physical education department, as with other departments in the school, teachers are supposed to be evaluated on a yearly basis. They should sit down with the department head to establish personal and professional goals in terms of their teaching for the academic year, and be observed formally and informally on at least two occasions. According to Ms. Jackson, however, in her 21 years at the school she has only been formally observed on one occasion.

Curriculum

Physical education at Colonial High School is mandatory for all students although the activities are elective. According to Ms. Jackson the program is

recreational and designed to introduce the students to as many activities as possible. The program emphasizes enjoyment rather than skill acquisition, and the main goal is to motivate the students to participate in the activities when they leave school. In physical education the students are divided into two groups; grades 8 and 9, and 10 - 12. The elective program combined with the grade split contributes to a lack of sequencing in the program. For example, students in 10th grade may elect to play volleyball and be in a class with 11th and 12th graders who have played the game in prior physical education classes. The teacher, therefore, needs to teach the basics to the "newcomers" which results in repetition and little advancement for the older students.

Throughout the course of an academic year, students are exposed to approximately eight different units with a total of 17 activity choices including volleyball, floor hockey, badminton, fitness, frisbee, soccer, softball, archery, dance, and team handball. The number of units sometimes varies according to scheduling and weather constraints. The activities included in the curriculum are based on the expertise of individual teachers and also the nature of the students. If the "personality" of a class is such that the students can be trusted to sit on the sidelines during an individual sport such as archery in which there is not as much active participation, then individual activities will be offered. If not, the students primarily will be exposed to team sports.

The students elect their subsequent activity during the last class of their current unit. Instead of changing for physical education they all sit on the bleachers in the gymnasium and wait until the teachers indicate the choice of

activities. (The decision about which activities to offer next usually is not made until a few days before the unit begins.) The students are called by grade to sign up for the activity of their choice, at which point they run from the bleachers to the sign-up tables. The teachers use a rotation system to ensure that throughout the year students get their first choice of activity at least three times. For example, if seniors are called first for one unit, they will be called last for the next unit. When the allocated number of spaces for one activity are filled, students are automatically signed up for the other activity offered.

Student Participants

It is now time for the next physical education class and the students are all sitting on the bleachers waiting for Ms. Jackson to come into the gym and start the warm-up. She is frequently late for class, and in the interviews several students expressed their displeasure at having to wait for class to begin. As we sit at the side of the gym, let me introduce you to the students who are participating in this study.

Heather

Sitting on her own, closest to the door is Heather. As usual she is wearing a plaid long-sleeved shirt and her long wavy hair hangs down past her shoulders. She rarely talks with other students in this class and she describes herself as an outcast because she is from the "mill" (working class) side of town but "I do not fit the stereotype because I want to do well academically." Heather is officially a junior but she is taking an overload of classes to graduate a year

early. Her career goal is to be a cartoonist for Disney and when she graduates she will begin courses at the community college to work towards that goal.

Heather feels that "you don't really need gym, but at the same time it lets you mellow out from the rest of the classes." Her participation in physical education depends largely on her mood. She can be enthusiastic but usually much of her time is spent standing and watching the game. She will rarely move towards the ball but will attempt to contact the ball if it comes close to her.

Heather seems to understand the basic skills involved in both volleyball and team handball, but her participation is inhibited by her unwillingness to move. Interestingly, Heather participates in laser tag (a high-tec game of chase) outside of school, an activity which requires both involvement and movement.

Becky

Sitting close to Heather are Becky and Beth. They usually change in the communal-style changing room and arrive in physical education class together. Becky has the long straight dark hair which is sometimes tied back, and occasionally she wears glasses.

When she graduates Becky wants to attend the local community college to major in travel and tourism, and she sees no purpose for physical education now or in her future. As a result, she rarely attends physical education class unless it is a volleyball unit. Her passion for volleyball is clear and all other activities (with the exception of softball) are a waste of time. She describes herself as competitive but only in the two sports she enjoys, softball and volleyball.

Becky used to be on the school softball team and has played beach volleyball every summer since she was 10 years old. Becky exhibits a good understanding of positioning and is willing to share that knowledge with other students, but considering her experience and enthusiasm for volleyball, her actual skill level is not extremely high. Her reluctance to participate in any aspect of physical education other than playing the actual game is evidenced by comments to friends such as "Oh God, she's going to talk for an hour now!" as the teacher was explaining groundrules and drills for the class.

Beth

The gum-chewing student with long red hair sitting next to Becky is Beth. She describes herself as considerate and polite; "someone who has a temper but is also forgiving." Her temper can flare up in physical education class especially if she perceives another student (usually a guy) hogging the ball or being too competitive. She tries to pacify her aggressive opponents with comments such as, "It's just gym, it's only gym, calm down." Such indifference towards "gym" may account for her sporadic attendance, as Beth was absent more than she was present.

In volleyball Beth has a tendency to ball-watch with her hands by her sides. If required to perform a skill in which she feels confident, however, (e.g., serving) Beth is fairly consistent, successful, and usually a little smug about her ability. Actively involved in team handball, Beth understands strategies such as creating space and she works hard to get into a good shooting position, although often she does not receive the ball.

Out of school Beth does not really participate in sports but she does sit ups and push ups "every now and then." When she leaves Colonial High School, Beth wants to go the local community college mainly because her mother has advised her to pursue a career. If left to make her own choice, however, Beth said, "I just really want to be a Mom."

Nicole

Nicole is the student with shoulder length red hair, held back in a "scrunchie," who is moving from group to group. She loves to chat with other students and does not affiliate with one particular friendship clique. Nicole is a sophomore in a class primarily made up of juniors and seniors. Although one of the youngest in the class, she has few social inhibitions and describes herself as "loud." In a game, however, Nicole becomes a reluctant participant if the situation requires an individual performance on her part. For example, in team handball she actively avoided having to take a shot on goal even though her teammates encouraged her to try.

Nicole is usually an active participant who cheers her team when they score and fights hard to gain possession of the ball. She has a strong sense of fairness and becomes frustrated when the guys do not pass the ball to the girls. She is quick to alert Ms. Jackson to the injustice and voices her opinions with comments such as "I'm sick of guarding Alyssa, she never gets the ball."

Other than learning some new stretches, Nicole sees little value for physical education. Her attitude towards drills is summarized by her response as

Ms. Jackson explained that even Olympic teams need practice--"but this is not the Olympics, this is only gym class," Nicole replied.

Nicole participates in several extra-curricular activities. She jogs three times a week, more to "get out of the house" than to stay fit, and last year she tried out for the school softball team, but was ill during the final selection process. When she graduates, Nicole wants to join the military.

Tammy

In the center of the bleachers is a group of four female students, all seniors, including Tammy and Tiffany. Tammy is tall and her shoulder length dark hair is usually pulled back in a pony tail. She is a "star" athlete in Colonial High School, representing the school in track, soccer, and basketball, and her name is frequently in the local paper.

Tammy's attitude towards physical education is summarized by comments including, "don't worry about it, it's only gym class," and "don't take it so seriously, it's not like sports after school." Although she is a skillful, coordinated volleyball player, her unwillingness to take physical education seriously inhibits her success and that of her team. Occasionally she shows her knowledge and skill by demonstrating good control and distributing the ball to her teammates. Such behavior, however, is more the exception than the rule.

Tammy describes herself as someone who is shy and, therefore, enjoys being in a group with her friends. When she graduates she would like to study fitness and sport management at a state college.

Tiffany

The student with the green sweats and long blond hair is Tiffany. Like Tammy, she is a soccer player on the school team and until this year she also played softball. The seriousness with which she approaches physical education class mirrors that of Tammy (and the other two students in the group), but Tiffany is not as vocal in her opinions.

During drills, Tiffany is quick to compliment students in her group if they try hard or are successful. This encouragement continues in the game situation whether she is playing or spectating from the bleachers. In addition to being a motivator, Tiffany is also willing to give advice about particular skills if she sees a student is having difficulty. During the volleyball set she reminded her friend of the proper form, "Don't hit down, hit up," and demonstrated the correct action. Tiffany's personal skill level is difficult to judge because it is often masked by her lack of ability or willingness to be serious.

Tiffany describes herself as non-judgmental, athletic, and "sort of outgoing;" an interpretation supported by her actions. When she graduates from Colonial High School, Tiffany intends to go to a university although her major is uncertain.

I only observed Tammy and Tiffany during the volleyball unit. While initially they had agreed to sign up for team handball as their second unit of activity, after volleyball had finished, they elected to participate in indoor soccer instead. They completed all other aspects of data collection, but their action profiles reflect only their participation in volleyball.

Sylvia

At the far end of the bleachers, a group of five students are chatting (Sylvia, Dave, Cathy, Jay, and Jim). All are seniors with one exception, Cathy (a sophomore), and members of the school band.

Sylvia is wearing a bandana to keep her hair out of her eyes. She is sitting on the floor stretching her back and groaning about the impending class. Sylvia describes herself as lazy when it comes to physical activity as she is more interested in "activities of the mind than activities of the body." Upon graduating, Sylvia intends to study psychology.

Being heavy set, Sylvia indicates that her size inhibits her movement in exercise. Corresponding to this comment, Sylvia is a slow mover in the game situation who will attempt to contact the ball only if it comes within her reach.

Sylvia is very supportive of her teammates. She encourages them if they perform well and offers consolation if they make a mistake. In spite of her team approach, however, she is quite easily antagonized, especially if other students dispute her calls or do not take the game as seriously as she would like. In these situations she is quick to criticize and defend her position.

Dave

The very deep voice belongs to Dave, the tall, slim student with fair hair. Although very active outside of school, Dave sees absolutely no purpose for physical education. "I just put up with it and deal with it," he says. Dave wants to be an engineer and sees no relationship between physical education and his future career or life.

In spite of his attitude, Dave participates actively in physical education class. His basic skills are strong and he is able to direct the ball to his teammates quite consistently. When his feet are in contact with the ground Dave is usually in control of his movements, but if he jumps for the ball he frequently collides either with the wall or another student. He is usually able to laugh at these mishaps providing nobody is hurt by his actions.

Always watching the ball, Dave tries hard to create space to gain a shooting position in the team handball game. If his team is losing, Dave will call the members together and discuss a strategy to try to win the next point.

Cathy

Cathy has shoulder length light brown hair and is dressed in a white sweat suit. At the beginning of the term Cathy was very much a loner in this class who was gradually adopted by this particular group of students. Cathy describes physical education as something, "you have to live through... because there's nothing else you can do about it." Cathy is a ballet dancer who practices for at least three hours every day. With that amount of activity, she finds physical education meaningless as it does not contribute to her physical fitness.

As a result of her dance training, Cathy is extremely flexible and often leaves other students in awe as she performs stretches in the warm-up. Her skill level in activities, however, is limited. Although her court positioning is good, Cathy often has difficulty directing the ball to a teammate. Her involvement in the game is further inhibited by an apparent timidness of contacting the ball. Cathy seems afraid of the ball and will sometimes let it drop even if she is in a

good position. Occasionally, however, she is aggressive and fights for possession, but such instances are usually associated with a loose ball and not one she had to catch.

Jay

The stocky student with short brown hair is Jay who seems to be the joker of this group. In drills he will frequently fake passes to surprise his teammates and such antics are always followed by laughter. Jay describes himself as a very friendly team player who likes to socialize, and his social skills are evidenced by the fact that he also has a good rapport with students outside of his immediate friendship group.

Jay is always involved in physical education although his movement in class varies. Sometimes he is very active, running from one side of the gym to the other in an attempt to get free to receive the ball. At other times he tends to stand and wait for the ball to come to him and is then frustrated when the opposite team intercepts the pass. Jay attributes his involvement to the amount of sleep he had the previous night as he works nights in a local restaurant for extra money and also practices for jazz band at 6.30 a.m. three mornings each week. When he graduates Jay wants to attend a university to major in music, and for a career he would like to teach music, conduct, and play in bands.

Jim

The final member of this friendship group is Jim. He has short brown hair and the wiry build of a cross-country runner. Jim is energetic, fit, and quite skillful although sometimes he can lose control of his movements in his fight to

gain possession of the ball. Because there are others in the class who do not share his enthusiasm for activity, his involvement is sometimes intimidating.

Jim participates in soccer, frisbee, and hockey outside of school, and consequently he finds physical education "easy and simple." He does not feel challenged in class and maintains that, "it kind of all seems the same."

Jim is very supportive of his teammates, often giving them a congratulatory high five to celebrate a good pass or a goal. He also shows concern if a team member seems to be left out of the game and does not receive the ball even when they are in a position to score. If this occurs, Jim will remind his teammates to pass and share possession.

Sean

Sean comes running in to the class slightly late, baggy shorts flapping around his knees. He flings his baseball cap on the bleachers and catches up with the other students in their warm-up laps. Sean is very competitive in physical education, a characteristic he attributes to family basketball games. He is skillful in volleyball and cannot seem to resist spiking the ball even when the "no spike" rule applies. If another student comments on his rule breaking Sean disputes the action in a good humored manner before conceding the point.

Sean is very active outside of physical education class. He runs on the school track team, plays basketball and volleyball with his family, and lifts weights three times a week. His enthusiasm for activity carries over into physical education and he becomes frustrated when other students are not as involved in the class, "A lot of people just blow gym class off and we spend a lot of time

doing stupid things." To Sean, stupid things include drills because his real passion is for playing the game.

Jim and Sean completed all the phases of data collection with the exception of the final interview. Although this interview was scheduled, neither student attended, nor did they respond to telephone calls, messages, or a written letter requesting another time to meet. After two weeks of trying to re-schedule the interview, during which time both students graduated, I realized that it would not be completed. I have kept and used all of the data I collected from Jim and Sean, although their voices will not be represented in the information obtained from the final interviews. Table 1 illustrates the phases of data collection completed with each participant.

In addition to the students described above, Mike, Stephanie, and Megan also agreed to participate. I observed them all during volleyball and interviewed them twice, but then they repeatedly canceled interviews, and skipped physical education class and study halls. Their reluctance to participate was evidenced by their attitude, avoidance of me in the hallway, and their constant stream of excuses as to why they did not show for scheduled interviews. After numerous failed attempts to re-schedule data collection with them, I decided to drop all three from the study thus reducing my participants to 12. None of the data I collected from these three students is used in this study.

Summary

This section described the context in which this study was conducted, including the community and school; physical education facilities, personnel, and

curriculum; and student participants. It was intended to provide you, the reader, with an understanding of the context by transporting you to the actual setting. The images created will be used throughout this chapter to help explain the influence of context on the translation of beliefs into action.

Table 1. Phases of Data Collection Completed with Each Participant

NAME	VB	TH	Int 1	Int 2	Int 3	Int 4	Int 5
Heather	X	X	X	X	X	X	NA
Becky	X	X	X	X	X	X	NA
Beth	X	X	X	X	X	X	NA
Nicole	X	X	X	X	X	X	NA
Tammy	X		X	X	X	X	NA
Tiffany	X		X	X	X	X	NA
Sylvia	X	X	X	X	X	X	NA
Dave	X	X	X	X	X	X	NA
Cathy	X	X	X	X	X	X	NA
Jay	X	X	X	X	X	X	NA
Jim	X	X	X	X	X		NA
Sean	X	X	X	X	X		NA
Ms. Jackson	X	X	X	X	X	X	X

VB = Volleyball

NA = Not Applicable

Int 1 - Int 5 = Interviews 1 through 5

TH = Team handball

X = Completed

The remainder of this chapter is devoted to the exploration of Ms. Jackson's beliefs and those of the students in her physical education class. Examples of the data from which the beliefs were derived are used throughout the discussion, and the action profiles, summaries of teacher and student beliefs, and repertory grids can be found in appendices J, K, L, and M. respectively.

Student Beliefs

Analysis and interpretation of the students' beliefs presented several challenges. First, as previously mentioned, accessibility is one of the primary difficulties inherent in investigating beliefs. Participants may be unaware of their beliefs, conscious of but unable to articulate their beliefs, or reluctant to reveal their beliefs. The issue of accessibility is heightened when core beliefs are sought. A core belief forms the center of a belief system and organizes the other beliefs within that same system. Core beliefs may be so ingrained and taken for granted that they are rarely discussed. Unlike common themes or categories which can usually be traced to quotes from each participant, core beliefs may be the infrequently mentioned, almost invisible links which touch each belief and draw them together. Accessing and identifying core beliefs, therefore, is often left to the interpretation of the researcher. The diagrams preceding my explanation of each belief system are an attempt to visually present my interpretation of the web created by each set of beliefs and how the core belief influences all the others in the system.

The second challenge was created partially by the intentionally broad nature of the research questions in this study. This investigation sought to identify beliefs about any and all aspects of physical education, rather than confining the participants' responses to one specific area. Consequently, this open structure allowed and encouraged the identification of belief systems which may seem disparate in depth. The first system deals with beliefs about physical education as a school subject, while the second refers to a very specific aspect of class content, the importance of having friends in class. Although the depth of these two systems differs considerably, nonetheless, they represent the important beliefs held by the students in this study.

The final challenge associated with the identification of students' beliefs lies in the fact that several contradictions surfaced throughout the analysis and interpretation. Such conflicts are inherent characteristics of belief systems and illustrate how these students incorporate contradictory beliefs within the same system. The contradictions are described in detail during the final section of each belief system.

The beliefs held by the students in this study can be divided into two main groups representing their belief systems about physical education. The first system focuses on physical education as a school subject and seems to be driven by the fact that the students believe physical education is simply not important. The second belief system centers around one particular aspect of physical education, the importance of having friends in class. (See Appendix K for summaries of the students' beliefs as presented to the teacher). In the

following sections each belief system is explored independently although links between them are discussed.

Gym Class is Not Important Now or in the Future

The following narrative is written solely in the words of the students and is included to provide a lens through which to view their beliefs. Every student's voice is represented at least twice, and I hope the narrative will offer the opportunity for you to re-visit physical education through the eyes of a high school student. The paragraphs in the narrative are written in the words of a number of students talking about the same topic, hence quotes included in the same paragraph represent the voices of several students. The brackets are links I have inserted to help the narratives flow.

I don't think I've learned anything in gym that's going to help me succeed. I've been here four years and I don't think it's held any relevancy for me whatsoever. Everything else in school you're doing something that's supposed to help you throughout life; I don't think gym is ever going to do anything for me.

Don't get ready for any excitement because there isn't any. Every gym class is the same. I mean we are able to say exactly what we are going to do, the exact words, like what she (the teacher) is going to say, and when to do it. It kind of all seems the same.

Gym doesn't teach you anything [and] I don't think you have to learn anything. I mean I don't come out of there saying "Wow I learned this today." I didn't learn anything that I didn't already know. I mean

personally I just go out there and do, and I know it, and if I don't then I just improvise. Basically it's a little time out, [and] I don't consider it a school class. It's like a state law that we should take it, which makes it even more of a burden to go to. It's something you have to do, you know you have to do it and so people do it.

For kids who do play sports, gym just becomes something that's silly and stupid. It's kind of like a blow off class. I don't have to concentrate and like figure out problems, I just sort of do and don't think about it. It's like a break from everything, you need something fun besides all these hard classes you have to take. Gym class I think is like to get away from the books, these are like the years that the colleges stress upon and so you definitely can't be sitting there studying all the time; you need a break from it.

Gym is like waking up in the morning, you do it, somebody doesn't ask you, "Oh how did you wake up this morning?" You just do it. I really see no purpose for gym...it's just something that we do.

I go to gym class because I have to and not because I want to. I think it's boring because a lot of the time, nine times out of ten, I don't want to be there, [and] when you get stuck in an activity that you don't want to do then it's stupid, it's wicked stupid. This mandatory thing is just way out of hand, and if it wasn't mandatory I wouldn't take it, [because] you don't need gym unless you want to be a gym teacher.

Figure 3 is a diagrammatical representation of the belief system. The core belief (gym class is not important now or in the future) which organizes and influences all the others within the system is illustrated in bold capital letters in the center oval. Other beliefs written in capital letters act as secondary level organizers. The numerical labeling is to assist identification and is not a priority order. Although the secondary level organizers are not core beliefs, they are organizationally influential in the system and hence form the headings under which the belief system is discussed.

Gym Class is Not as Important as Other Subjects

Students began their discussion of the importance of physical education by comparing it to other school subjects and they believe it is not an important subject in school (See Figure 3, Box 1). Becky stated her view very directly, "It's [P.E.] not important at all. I take my other subjects a lot more seriously," while Sylvia explained that she doesn't "consider gym to be a school class."

During the classes I observed, students made several comments which also confirmed their belief that as a school subject, physical education is not important. In one volleyball class, a teammate of Tammy's was trying to bump the ball but was unsuccessful. Tammy responded by saying, "don't worry about it, it's only gym class." Beth reacted in a similar manner in team handball when a guy from the opposite team collided with her, "calm down, it's only gym class" she said.

Further support for the students' belief that physical education is not as important as other subjects can be seen in their descriptions of gym as a break

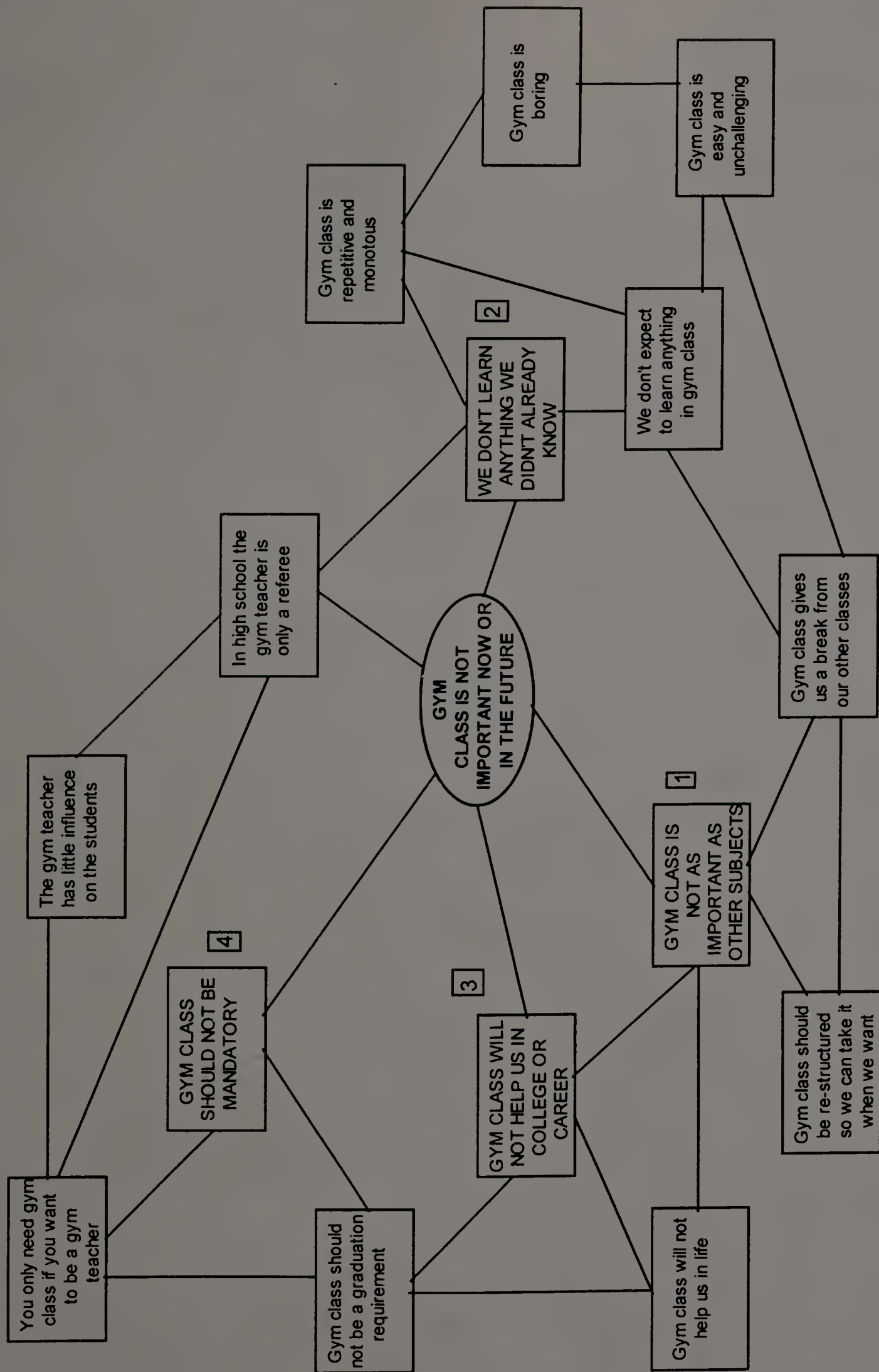


Figure 3. Student belief system one

from other classes rather than a class in its own right. The students dismissed physical education as, "kind of like a blow off class" (Sean) which serves a purpose by providing a break. As Nicole said, "gym's important though because like when I'm coming from a class and I know I have gym, it's kind of a relief," and Beth stated, "It's like recess because you can talk during it and you can play...I mean you have to pay attention but your mind isn't really thinking." These sentiments were echoed by all of the students and represent, in their opinion, the positive aspect of physical education. As Jay stated, "it just gives me a break from my other hard courses and sometimes it's the only time I get to fool around and stuff." On certain occasions, however, the break from class is viewed negatively. For example, "sometimes...it's nice to have a break and have gym, but then sometimes if you have a lot of work to do...and you're busy...it's a real pain" (Dave). Tiffany agrees, "sometimes you could use your studies instead of gym."

Dave and Cathy offered an alternative structure for physical education which would accommodate the students' perceived need for flexibility in their schedule. Their suggestion parallels a library-style, drop-in system with, "gym classes running the whole time and then whenever you wanted to take one you could" (Dave). Each student would have to take a certain number of physical education classes and would be provided with a gym card to be punched every time they attended class. Such a system would enable students to fulfill their physical education requirement by participating at their convenience when they did not have work to complete for other classes. The description of the optional

'gym schedule' was clearly articulated and Cathy and Dave were very excited about their idea. The drop-in system they described, however, reinforces their disregard for physical education as a learning experience, as class content and continuity would be sacrificed for the sake of convenience.

Other than providing a break from class, the only credit given to physical education is exposure to activities the students would not participate in on their own, and archery was the main example used. Tiffany explained, "I could never have gone out myself in the woods and like shot something," while Dave stated, "It's not like you can go outside your house and say yes, I own a bow and arrow and I'm going to go and shoot." Apart from the novel activities taught, the only sport to gain any respect from the students was volleyball, which most of them played recreationally outside of school. Volleyball was identified by the majority of students as the most enjoyable activity offered in physical education, but the rationales behind this opinion were very different. Becky, whose passion for this sport was very clear, explained that, "I just love volleyball...it's a hard game to play...it's competitive and you've got to be really good to know how to play." Others held a very different view, "volleyball is probably the best...I mean it's something everybody can do" said Dave, and Cathy agreed, "it's like it's easy, all you have to do is hit the ball." For most students, volleyball was seen as a great equalizer, as skilled students could not easily dominate because they could only hit the ball once during each play.

In Gym Class We Don't Learn Anything We Didn't Already Know.

The students' beliefs about the importance of physical education were also reflected in their beliefs about learning (see Figure 3, Box 2). Several students were reluctant to claim any learning occurred in physical education class: "I don't know if we learn anything really" (Beth). Tiffany identified an interesting twist in the learning curve: "It's like you can't really learn anything, it's like you either have the skills or you don't," and others agreed that they already had the skills before they attended "gym class." As Dave reiterated, "we've been playing volleyball since we were little kids, so obviously we know how to do it."

Students indicated that most of their sports skills had been learned through participating in activities outside of school with family and friends, as Sean stated, "a lot of the things that I learned like my competitiveness and skill I learned from like playing with my cousins." The main difference between physical education and outside activities is the fact that participation is voluntary; "you can do it at your own pace and the way you want" (Becky). Students objected to being "forced" to participate in physical education when they really did not want to because of the activity, time of day, or their mood. They also indicated that physical education class did not help them in their activities out of school because, "when you play like badminton at a party...or volleyball, you don't like have to touch it (the ball) three times or whatever" (Tammy). Tiffany agreed: "You can hit it (the ball) any way you want to outside of gym."

The key phrases here seem to be concerned with the students being able to do what they want. Interestingly they do not react the same way to other

classes taught in school, such as math, which is not structured to their own schedule and they are still “forced” to attend. This involuntary learning experience is acceptable mainly because math is required for college or a future career.

Students who competed on athletic teams compared physical education to school sports and, once again, physical education did not fare well in the comparison. According to Jim, “see, I compare gym to when I play soccer and the amount of physical activity or anything that happens when you play soccer doesn’t even compare to gym.” Other than the amount of activity, Tammy indicated that, “I think like sports after school that you get into are more important...there’s goals that you are trying to achieve. You don’t really set goals in gym class.” Both Tammy and Nicole mentioned teamwork as they compared physical education with athletics. In athletics, you’re working with the same people every day, whereas in gym...it’s different people and if they show up or not” (Tammy). Nicole took a slightly different stance when she explained that in physical education, “you always know who you are going to be playing against...when you’re on a team you go up against different schools...and it’s better.” Somewhat surprisingly, Heather and Sylvia, who are both non-athletes, viewed physical education and athletics as being synonymous.

With regard to learning, Jim did admit, “you can learn how fun physical activity can be.” His definition of fun focused around being on a team with his friends and participating in a competitive game. Additionally, some students stated that they learned teamwork in physical education. For example, Heather

maintained, "you learn how to work with other people. You learn teamwork...You learn what you're good at and bad at basically...you've also got to learn how to change real quick." In contrast, Cathy described that she learns, "teamwork and stuff outside of gym in like classes; biology working with teams you learn how to do like different things." She feels that physical education just reinforces and repeats what other classes provide although she does concede that perhaps all the other classes reinforce what she learns in physical education, but really does not take this possibility seriously.

The notion that physical education is repetitive was referred to by most of the students in the study. The repetition was exacerbated by the fact that students believed they were being forced to repeat meaningless activities with little value to them now or in the future. The result was a tedious monotony which did little to create an atmosphere conducive to learning. Sylvia commented on the lack of variation in the activities offered in physical education: "I'm sick of having the same activities every year." Tammy stated, "I hate the first couple of days of the sport because you're like learning but you've like done it for the past three years. It's just the same thing over and over again," and Becky agreed, "I mean this year we are seniors and we have done the same skills, the same things since we were freshmen...she taught us the exact same thing over and over for four years."

The repetitious monotony of physical education was again emphasized when I asked the students to describe an incident that really stood out for them in a class they had taken. With two exceptions, all the students who answered

this question graphically described a physical education lesson in which they had fallen or been injured. Heather broke her toe, Sylvia was hit in the eye with a frisbee, and Cathy explained that, "One time I got my head opened...I fell off the bleachers." Only Beth described a positive experience in physical education when she and her sister were in the same class just for the day and they dominated the floor hockey team by scoring all the goals. Jay described the lesson when the incident which resulted in the court case took place, but all the other students indicated that physical education lessons "kind of all seem the same" (Jim). All the incidents described were totally out of the ordinary and although they occurred in physical education, they were not related to class content. As Dave said, "every gym class is the same. There's nothing different really about them. Sometimes people get hurt but that's about all."

Such monotonous repetition led to boredom and intolerance for practice. This was evident by the students' resigned acceptance that drills were going to be part of the class and something to be "lived through" until they could play the game. According to Nicole, Ms. Jackson, "put too much of like the skill to you and we just want to like have fun and be able to play." Several students including Jay considered drills to be useful initially: "I guess if you want to play the game correctly and you want to have a good game." Sean maintained that, "drills are fine but only to get yourselves warmed up for the game." After that, drills were thought to be a waste of time, especially for students who already know how to play: "We spend a lot of time doing stupid things...I know I took a volleyball class when we spent over half the course on drills" (Sean).

The students' dislike of drills seemed so great that it clouded their ability to recall what actually happened in a unit. For example, Tiffany stated, "You don't want someone sitting there and giving you instructions the whole time, you just want to play. And sometimes, I think it was in volleyball, we have to sit there and like set for the whole period and it's just like you want to go out there and play." Her description contradicts my observations of the volleyball unit in which drills were only a small part and much of the time was spent in modified or full games. Her response also reveals a reluctance to accept the validity of a modified game of volleyball with specific rules to allow for the game to flow, indicating that only the 'real game' was given any credibility.

Boredom and monotony also created the belief that physical education is easy and unchallenging. Jim stated that in physical education, "I think you are allowed to learn the game very basically and simply like this is the way it's played...it's more like learning about the sport than how to play it ." As he explained his comment Jim referred to the fact that he found physical education to be unchallenging and simple largely because of the repetition and lack of competition in classes.

When asked what they wanted to learn in physical education, only Sylvia and Sean had a positive suggestion. Both students wanted to learn the rules and techniques of some new activities. Nicole just wanted to get credits from physical education, while Beth wanted 'gym class' to be fun. Cathy commented, "we're not expecting to learn anything really," which was indicative of the sentiments expressed by others. Even Tammy who, if you recall, wants to

pursue a career in fitness and sport management said, "I don't think you have to learn anything in gym class." It seems, therefore, that learning in physical education is not considered important even by a person who wants to make a future investment in the sport and fitness field. The following statement by Dave succinctly summarizes the opinions of the other students with regard to learning in physical education; "We just really go in there and this is just gym class, you go in there not to learn. Classes are to learn, gym class is to do gym."

Although students attributed little learning to physical education, Dave and Cathy had an interesting conversation which shed some light on their thoughts about learning in math class, "I mean it's not that we want to learn it, it's that we are learning...and I can actually say I learned this and this." Their reluctance to learn is clear, disturbing, and not confined to physical education. They were not alone in their thinking. Beth admitted to frequently skipping school towards the end of the day irrespective of what classes she missed, while both Tiffany and Tammy claimed that their family never really asked about school at all because, "there are so many years of school, it just gets blown off" (Tiffany). These comments reflected a general apathetic attitude toward education, but while students tolerated other school subjects, physical education seemed to be the main target of their indifference, primarily because it was not required in college.

Closely related to the students' beliefs about the lack of learning in physical education was their belief about the role of the teacher. As physical education is a subject in which little learning occurs or is expected, the students believed that the role of the teacher was reduced to being little more than a

referee with limited influence. As Dave said, "we think more of the gym teacher as a referee than as a teacher you know," and not an important part of physical education. Tiffany stated, "I mean sometimes you don't really want the teacher there," and Sylvia concluded, "sometimes the teacher just gets in the way." The lack of importance placed on the teacher was also supported by the fact that when asked to list the characteristics of 'gym class' for the repertory grid, the teacher was not part of the long list the students developed.

Gym Class Will Not Help Us in College or Career

Throughout their discussions of physical education, students frequently referred to the fact that it was not required for college or a career (see Figure 3, Box 3). Their disdain for physical education in relation to other subjects links strongly to their belief that it will be of little value in the future. Becky believes, "regular subjects like math and social studies...that's what you need to get into college...and you need that to get a good job." Dave confirmed Becky's view by saying, "When you're in math class you know that you're going to need this stuff in college."

Not only will physical education not be useful in college, but it holds little relevance for life: "I don't think gym is going to help me in life you know. I don't see how it could be meaningful or relevant to what else we are going to do in our lives" (Dave). The sentiments in this quote from Dave were echoed by all the participants. Cathy expressed, "you don't really need it [P.E.] though for like life," and Becky admits, "You don't need gym class. You could be a couch potato and still make it in the world." Even Nicole who said that the stretches she learned in

the warm-up may help her later in life stated, "it's gym class, it's not like going to do anything for us really."

Perhaps the most surprising comment about the value of physical education in the future came from Beth. She expressed shock that physical education teachers might think students would continue to participate in activity after they leave school, "I mean you do activities all the time...and I never thought that gym teachers think of it like 'I'm going to teach this so that they may want to pursue it,' I never thought of that."

Gym Class Should Not be Mandatory

The strong belief that physical education will be of little use in the future led to comments which reflected the students' intense disagreement with the fact that physical education is mandatory and a requirement for graduation at Colonial High School (see Figure 3, Box 4). Sylvia expressed her views very candidly: "this mandatory thing is just way out of hand! I find it stupid that I have to take four years of gym class to graduate...I like activities of the mind rather than activities of the body, and I'd rather be taking a different course."

Becky's comment, "you don't need gym unless you are going to be a gym teacher," reflected the belief held by most of the students in this study that gym class is unnecessary, irrelevant, and not personally meaningful to them as individuals. Only four students indicated that they would continue to take physical education if it was made an elective subject but only because "it's a break from class you know...a little break, a little exercise, a little excitement and enjoyment or whatever for a little while and then you go back to school

academically" (Beth). For all the others, physical education was definitely not a priority, and they would only participate if it fitted with their schedule for the day.

Contradictions

The students believe that physical education is simply not important now or in the future. This appears to be the core belief which influences and organizes the others in the system and causes the students to treat physical education with disregard and disdain. There are, however, several contradictions among the data presented highlighting inconsistencies in student thinking and discrepancies between their beliefs and the behaviors observed. First, the students believe that physical education is not an important part of the school day except in providing a break from other classes, which can be positive or negative depending on their daily schedule. Most of the students, however, stated that the time spent in physical education should actually be extended to a double period, "I don't think it's long enough...it needs to be at least an hour" (Jay). Other students agreed and maintained that a longer class would allow more game play. Some of the female students in the study also said that an extended lesson in physical education would allow them time to change clothes, something which at present they barely have time to do.

Second, several students referred to spending most of their physical education classes doing drills and the futility of such activity given that they already know how to play the game. Tiffany specifically commented on the volleyball unit and, as previously mentioned, her comments did not correspond with my observations. Ms. Jackson did not spend the whole class in drills, but

rather modified games which either focused on specific skills or did not include all the rules of a full game. It is an interesting contradiction that students placed little or no value on the modified games and yet indicated that outside of school they don't play the full game, but instead they modify the rules! It seems as though physical education cannot win even when it does emulate activity outside of school.

Third, there is a contradiction between the repetitive, monotonous nature of physical education which caused so much negative feeling on the part of the students and their actual ability to perform activities. All the students agreed with Cathy who said, "I mean high school kids know what they are talking about too...they have taken gym for 10 years of their life and they pretty much know like all the activities." Such confidence, however, did not transfer into behavior. Cathy was timid and reluctant to hit the ball, and in volleyball her setting was often inaccurate. Nicole had little confidence in her own scoring ability in team handball and frequently tried to pass to her teammates even if she was in the best position. Sylvia demonstrated little understanding of offense and defense in team handball and Dave lacked control of his movements. Becky thought she was a very good volleyball player and yet her basic serving was poor.

The students' self-assessment of their skills was imbalanced and, for the most part, they described their abilities at a higher level than I observed. Perhaps such misplaced confidence was largely a result of years of experience repeating the same activities with no accountability system in place to measure

improvement, leading students to believe that physical education is unchallenging and easy, and therefore they must be skilled performers.

A fourth contradiction became apparent in comparing the students' discussion of the teacher's role and influence in physical education with their reactions to the belief statement presented by the candidate for the hypothetical job at their school. While most students placed little importance on the teacher's role in physical education, they were quick to form an opinion as to the suitability of the candidate and some students even offered additional characteristics they would expect to find before they would hire a teacher. Tiffany said that a teacher should, "be patient with everybody," while Cathy wanted the teacher to be a, "people person." Other important characteristics included caring, knowledge of a variety of activities, and an understanding of students. Jay maintained that teachers should have prior teaching experience before he would hire them and Dave took this idea one step further by stating that he would want to see teachers actually teach before considering their application.

Perhaps the key to the discrepancy surrounding this belief about the role of the teacher lies in a statement made by Dave, "teachers do have a strong impact; the younger the student the more impact I think the teacher has." The students in this study were either sophomores or seniors in high school and believed that because of their age and experience, they no longer needed a teacher to improve their skills. When asked to think about hiring a new teacher, however, perhaps they considered the students in the younger grades who may need some teaching expertise.

The Influence of Context on the Translation of Beliefs into Action

For the students in this study, the context in which they are involved (i.e., the school) essentially inhibited the translation of this particular belief system into action. In Colonial High School physical education is mandatory, rigidly scheduled, and required for graduation. Despite the students' beliefs about the value of physical education both now and in the future, therefore, they have to attend classes. Interestingly, the fact that physical education is a state mandate does little to promote its importance to the students but rather seems to serve as yet another reason to resent having to attend. As Cathy said, "it's a state law that we should take it, which makes it even more of a burden to go to."

Within the context of the school and the structure of the physical education class, however, students can and do manipulate the situation to express their beliefs whenever possible. The variety of student responses to being assigned drills in volleyball ranged from reluctant participation to blatant disappointment to quiet resignation. Sean re-designed a volleyball setting drill to include hitting the windows close to the gym ceiling. When Ms. Jackson explained the need for drills, Nicole expressed her feelings in class by stating, "but this is not the Olympics, this is only gym class." Dave, Jim, Cathy, and Jay usually worked at the task assigned but were obviously relieved to play the game. Becky and Beth participated quietly, while Tammy and Tiffany rarely took the practice seriously. Heather and Sylvia were often unsure of the task and relied on copying others rather than listening to the teacher.

In team handball students often disputed calls Ms. Jackson made in a game and treated her more like a referee than a teacher. When Ms. Jackson called a foul on Jim for contact, he immediately argued, "was not." There were also heated debates over the boundaries of the scoring zone. In volleyball, however, Ms. Jackson never assumed the role of referee, although occasionally she would call a foul. In this unit the students rarely responded to her presence as she rotated between the two concurrent games.

Some individual students seemed more determined to act on their beliefs than others. For example, Becky who strongly believed that the only useful activity in physical education was volleyball, acted on her belief by providing a variety of excuses for not participating in team handball. She was only active in two team handball classes.

Having described how the students express some of their beliefs in class, it now remains to describe some of the contextual factors which support the students' beliefs about physical education as a school subject. Physical education is the last school subject to be scheduled at Colonial High School; this fact dictates the grade groupings for classes (8-9; 10-12). As previously mentioned, there is no skills sequencing largely because teachers are catering to students with such a wide variety of experience. In turn this leads to a repetitive curriculum in which students, who take an activity more than once, participate in the same drills year after year. Such monotony does little to promote a challenging environment in physical education, but rather supports the notion that there is a minimal amount of subject matter to learn. The monotony also

diminishes the importance of physical education in relation to other school subjects where repetition is usually limited to exam reviews and each academic year provides new material and advancement.

Ms. Jackson herself, perhaps inadvertently, contributes to the students' belief that physical education is not important. She is frequently late for class and the students have to sit for several minutes on the bleachers waiting for her to arrive, a situation which they resent, "you go into the room and usually wait for about five minutes for the teacher to finally show up" (Jim). Her lateness conveys the message that physical education is not important enough to demand timeliness. Additionally, equipment was rarely set up ahead of time and the dividing doors in the gym were not appropriately positioned at the beginning of class. On numerous occasions Ms. Jackson took several minutes in class to close the doors, and although the students warmed-up during this time, there was no instruction or teacher input. Again, such actions do not promote the importance of physical education.

The physical education facilities at Colonial High School were adequate but often dirty and cold. The lockerrooms were rarely cleaned, "it would be nice if they aired out the gym and lockerrooms once in a while...by the end of the year it smells so bad that you don't want to go in there" complained Sylvia. As I walked through the lockerrooms there often was clothing and litter strewn on the floor even at the beginning of the school day. One day graffiti was sprayed on the wall and remained on display for several days before it was finally removed by Ms. Jackson rather than custodial staff. For the female students in this study

the state of the changing facilities was very important and they were clearly disturbed by the lack of cleanliness. In comparison to other facilities in the school the girls' lockerrooms were definitely neglected, an action which again supports the belief that physical education is not important.

In addition to the internal, school-based, contextual factors already mentioned, the students also encounter external influences which may affect their beliefs about physical education. For example, the students did not hesitate to respond when asked how their parents value physical education. "My Mom don't care, she's more interested in my academic grades than she is in gym class" said Sylvia, and Heather stated, "my Mom went here (Colonial High School) and she only took gym twice; the first day and the last day. So she doesn't care about gym." While parents were concerned about the academic grades, "they figure that gym is a given; if you show up and participate then you'll get an A" (Jay). These parental beliefs expressed through comments or actions served to inform and reinforce the students' beliefs about the importance of physical education both now and in the future.

To summarize, "gym class is not important now or in the future" is the core belief around which this belief system is structured. As physical education is mandatory at Colonial High School, initially the immediate context seems to inhibit the translation of this belief into action; other contextual factors, however, support and contribute to the strength of this belief system. Through internal and external influences, students are subjected to a constant barrage of information about the minimized role physical education plays in their present and future.

With these ever-present reminders it is little wonder that the unwavering strength of this belief system is a common link among all the students in this study.

It's Really Important to Have Friends in Gym Class

The nature and structure of this belief system differs significantly from the previous system identified. First, it is confined to a particular aspect of physical education rather than encompassing the subject as a whole. The beliefs expressed are all connected to the core belief that, "It's really important to have friends in gym class." Second, the tone with which students described their beliefs was much more positive. While the first system focused around physical education, a subject which had to be endured, the second system enabled them to discuss something they enjoyed, being with their friends. Finally, some of the beliefs expressed prompted heated discussion among the students, or were only identified by a particular group of students. For example, only the girls verbalized their concerns about being excluded by the boys. While there were instances where students differed in the first belief system, in general there was an overriding sense of agreement among the students.

The following narrative is written in the words of the students. The intention here is both to provide an opportunity for you to re-visit high school physical education as a student and to create a lens through which to view the students' beliefs examined in the remainder of this chapter. The brackets contain links I have inserted to help the narratives flow.

It's good to have friends in class. I mean even if it's only one person it helps a lot. I don't know, maybe it makes you feel more included

or something. You don't feel like that loner that's sitting on the side.

Having friends in gym class makes you feel more comfortable because you can totally be yourself with your friends, [and] gym goes by quicker if you have people to talk to. You can get by in a math class or a geometry class without friends but if you don't have kids to talk to in gym class it's just really boring. The more friends that are in your gym class the better it is. You can really help your friends, but if I were to go up to someone I only see in gym class and say, "this is how you should do it," they might get offended by it.

Gym is just recreational and for fun. If your friends are in the class at least you know you have a lot of fun. I like to have fun, joking around sometimes and talking with my friends. I think gym should be more fun than it is. About half the time it's fun depending on who is in your class [and] it's fun when you actually get to play instead of doing a lot of drills.

Gym is not just about physical education, it's about getting along with other people. It kind of lets you be friends with other people that you didn't know before or that you didn't really like and you have student interaction with other grades. In order to have teamwork you have to have students that interact with each other. Sometimes the guys tend to stick together and there's not a lot of girls that get in on the action. The guys don't pass to the girls and think that the girls are inexperienced and can't do anything. If you don't have teamwork then everyone is going to be doing their own thing and there's no competition because you're not

working together. If you don't have communication then you can't be a team.

[Some] kids don't want to participate [and] I hate it when I totally give my all and people are just standing there and doing nothing. I think they should have like two different gym classes, one that would be like more competitive and one just more recreational. Then the people who want to try should play against other people who want to try, and people who just want to stand there should play against other people who just want to stand there. That way everyone has their own kind of fun.

The diagrammatical representation of this second belief system is illustrated in Figure 4. The entire system is organized around the core belief (It's really important to have friends in gym class), and links among other beliefs are shown. Again, the core belief is represented in the center oval and the secondary level organizational beliefs are written in capitals. The box containing beliefs about competition in physical education is divided by a dotted line to represent the conflicting beliefs held by the students about this topic.

Additionally, the italics indicate that the belief, "in gym class the boys don't pass the ball to the girls" was only expressed by the girls in the group.

Having Friends in Gym Class Makes You Feel Included

The students in this study believed strongly that it is very important to have friends in physical education class. Being able to socialize with friends made them feel included and comfortable (see Figure 4, Box 1). Heather stated, "you feel more comfortable when you have friends in class. You can be yourself

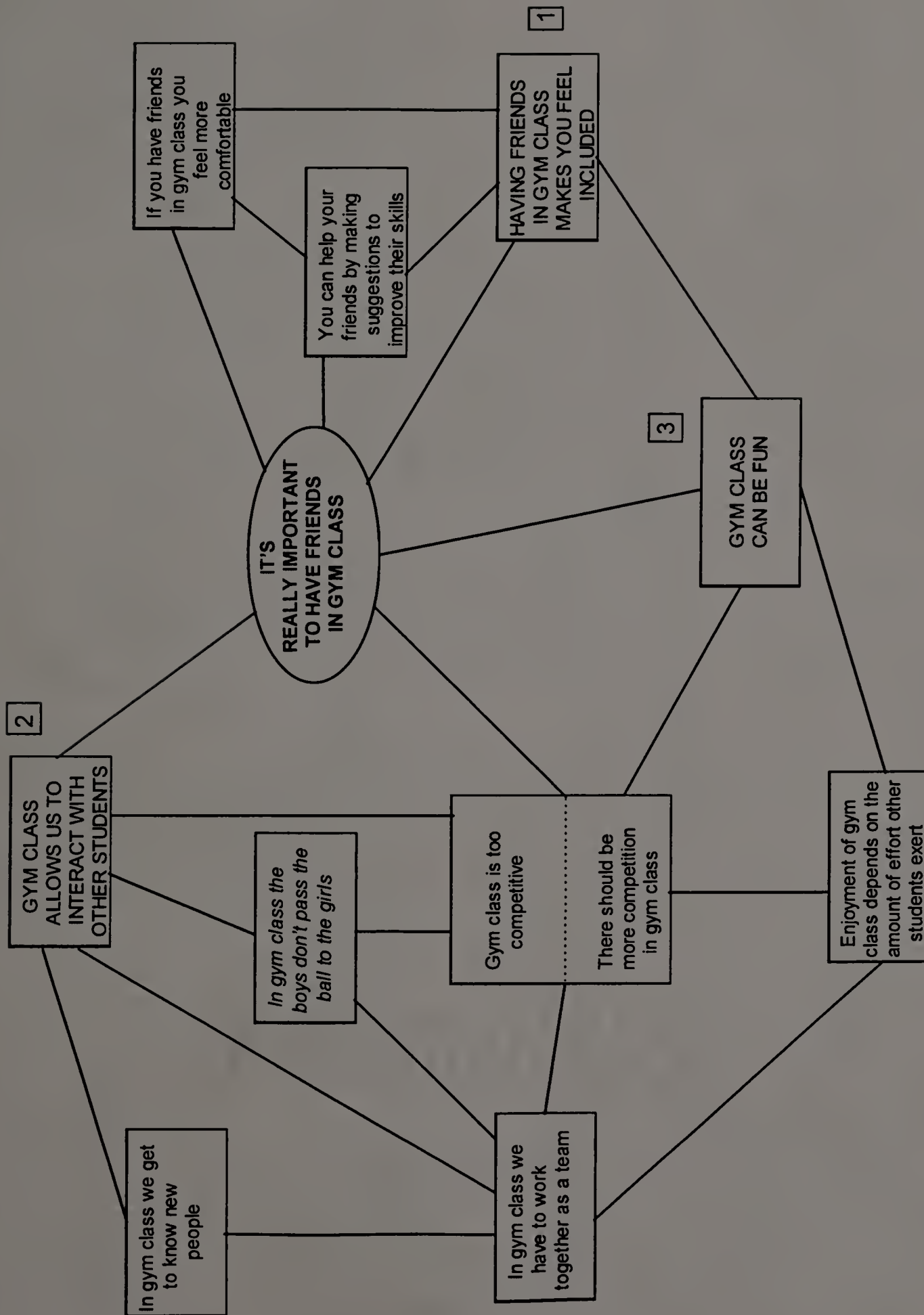


Figure 4. Student belief system two

and not have to worry about what other people are thinking.” Sylvia explained how students are excluded from games if they are not on the same team as their friends, “usually if you’re in a class that takes a team effort, if you’re not one of their friends then they won’t include you.” Tammy reiterated the notion of being left-out and lonely, “it’s good to have someone instead of just standing there by yourself...sometimes you feel awkward.” Nicole described how she felt in physical education when she did not have a friend in the class, “if you don’t have friends in there you don’t put as much effort to it because you feel stupid...because you don’t know anybody.” Nicole’s description was echoed by her actions when she entered Ms. Jackson’s office on the first day of the team handball unit pleading to be changed to indoor soccer because all her friends had signed up for that particular activity.

The importance of having friends was really highlighted by Heather who was taking two different physical education classes at the time of this study. As indicated in her action profile (Appendix J), in the classes I observed she often sat on her own at the beginning of each lesson and then worked with a variety of people when practicing drills, rather than with one specific group. When we discussed her interaction with other students Heather explained, “If you saw me on Monday or Tuesday (the other class) you’d probably see a difference...in the other class I probably would have been with the same kids...I don’t (have friends) in this class, so I don’t usually have the choice about who I’m going to end up playing with or against.” In both physical education classes Heather was taking volleyball, so the activity and the teacher were the same, but her experiences

were significantly different due to the fact that she did not have friends in one class: "Sometimes people won't pass you the ball...because they don't know you...but if you have friends you don't feel like everybody hates you."

Some students distinguished between friends and acquaintances, emphasizing that although they might know several people in the class if they were not members of the same social group, individuals might be excluded from drills or team activities. As Sylvia said, "if I don't have a friend, but I have an acquaintance and they have a better friend and go with them, then I'm stuck out in left field." This concern was also expressed by Jay who explained that, "there has to be your little social clique almost, I mean you've got to talk to someone."

Students also discussed the fact that they were able to help their friends by offering suggestions for improving skills, "My friend started getting really good because I was showing her how to do things; it was real easy to talk to her because she was my friend" (Becky). In the classes I observed, Tammy helped Tiffany to develop a successful overhand serve in volleyball while Dave frequently encouraged his friends and gave them positive feedback on their performances. To illustrate the importance of helping friends rather than other students in the class, Becky described an incident when she tried to suggest an alternative technique in volleyball to Nicole. As she and Nicole were not in the same friendship clique, Becky explained, "if it's somebody else (not a friend) you don't know how they are going to react...some people say 'Oh she thinks she's so great' like Nicole, she said that when I tried to explain something to her."

Consequently, students are reluctant to offer suggestions to others who are not members of the same friendship group.

Gym Class Allows Us to Interact With Other Students

Although the main focus of this belief system is the importance of having friends in gym class, students frequently explained that being able to talk and interact with other students was a characteristic which set physical education apart from other school subjects (see Figure 4, Box 2). As Jay said, "it's more interactive than a regular math class or whatever." For Tiffany, the key difference between physical education and other classes was structure as, "in classes you have to sit in that seat and you can't move," so interaction with others was minimal. Because of the interactive nature of physical education, having friends in class was much more important than it was for other subjects. As Beth explained, "if you're in a regular class you don't have to talk to anybody," and Jim continued, "but if you don't have kids to talk to in gym...you just have to stand there by yourself."

In apparent contrast with the previous discrimination between friends and acquaintances, the students indicated that they valued the opportunity to interact with other students from their own school year. Beth stated, "I find that most people I don't even talk to, but in gym class we have to talk, so we talk. It makes you kind of broaden up a little bit." Her comment reiterates the difference between physical education and other school classes, confirming that student interaction is a unique characteristic of 'gym class.' Heather agreed and explained that physical education is not solely about being with friends, but also

developing an understanding of others, "you learn how to play with other people instead of just you and your friends, you learn about other people." In addition to facilitating interaction among students in the same grade, Cathy also described physical education as the one class that allows students to interact with others from different grades. While this is due primarily to scheduling in Colonial High School, nonetheless, it created an important opportunity not provided by other subjects.

The issue of gender was another aspect of interaction raised by the female students, usually as they responded to the question, "If I was a new student in this class, what would you tell me about physical education?" Several replied that their answer would depend on whether I was a male or female, "if you're a girl, the guys don't pass to you in whatever game they are playing...when you are new you feel like they do it because they don't like you, but they do it to everyone" (Nicole). Tiffany was very irate when she described her indoor soccer class, "there's like five girls in the class and the guys won't pass [to us]; there's this one kid on my own team who was taking the ball away from me." This sentiment was echoed by Tammy, Heather, Sylvia, and Beth, and was supported by my observations in team handball where there were numerous occasions when female students were in the best position and yet did not receive the pass.

In contrast, Nicole explained, "if you were a guy and you were new it would be a totally different story...if you played sport or whatever, the guys would be like 'Oh yes, great'." When I asked what they would say to a new male

student in class both Beth and Nicole chorused in unison, "pass the ball to the girls!" Interestingly, none of the male students in this study indicated that their response to me as a new student would differ according to my gender. In fact, Dave, Jim, Jay, and Sean never mentioned the issue of gender at all in their interviews. The only evidence that any of them was aware of the exclusion of female students was shown by Jim who, at the end of the lesson in which the issue about sharing possession in team handball was raised, asked Sylvia how many times she had touched the ball during the entire class. Generally, the boys did not accept any personal responsibility for the inclusion of the girls in class. Perhaps their actions were a conscious choice, or maybe the boys were truly oblivious to the frustrations of their female classmates even though several girls strongly verbalized their anger in class. I should also add that activities such as team handball and soccer were the main catalysts for such exclusionary behavior, because in volleyball, "the guys like don't have much choice but to pass you the ball" (Nicole). As previously mentioned, once again volleyball was seen as an inclusionary activity and great equalizer.

In addition, to socializing with friends, meeting new people and the issues associated with gender, there were two other components of student interaction; teamwork and competition. Sylvia explained the importance of teamwork, "everyone has to do teamwork and you have to work at it together," and Becky agreed, "if you don't have teamwork then everyone is going to be doing their own thing...and you're not working together." Sean distinguished between teamwork in basketball and volleyball, "In basketball, if you find that your team is not as

skillful as you, you tend to take over the game...you can't do that in volleyball because you are forced to use other players...you've got to be a team player...and really use the players beside you to set you up." His comment supports the one made earlier by Nicole who referred to the fact that the guys have to pass to the girls in volleyball.

Teamwork, competition, and student interaction were all characteristics of physical education selected by the students to be included in the repertory grid. When asked which was the most important characteristic of the six listed, most students chose both teamwork and student interaction, explaining that one could not exist without the other, "teamwork and student interaction have a very strong relationship...in order to have teamwork you have to have students that interact with each other" (Nicole). Dave agreed, but took his explanation one step further to include competition, "teamwork can be said to be a form of student interaction and so can competition." Sylvia also explained the relationship in a similar manner: "With student interaction you have to have teamwork and then you have competition between two teams or two students."

Discussions about competition were varied and included debates about the amount and value of competition in physical education. Tammy, Tiffany, Sean, and Jim indicated that they would like gym class to be more competitive. Beth offered a different perspective when she said, "in gym you know it's competition, it's physical, it's what everyone does, it's like you've got to win." Beth also used competition to make an interesting comparison between physical education class and other school subjects. She explained that in her class,

“most of the guys, I try not to be sexist or anything but...they wanted to win...they just had to do it. But you don't see them 'Oh we're going to have finals...I got to do good, I got to study! It's just the total opposite.” It seems ironic that the subject which generates so little respect can stimulate competitiveness and motivation unseen in other school subjects. Perhaps this is a result of the public nature of physical education, for as Beth concluded, “[In physical education] they see what you are doing...but when you do your homework or classwork...no one really looks at how smart you are.”

There was also a strong link between competition and having fun, although the connection was controversial and differed among students. For Sylvia, competition detracted from her enjoyment of physical education, “I like to have fun. It's much more exciting when you're having fun in gym rather than when it's just pure competition.” In contrast, Sean, Jim, and Becky equated competitive game play with having fun.

Gym Class Can Be Fun

In addition to competition being associated with having fun in gym class, discussions about friendship and the amount of effort exerted by other students were strongly connected to enjoyment (see Figure 4, Box 3). In the first belief system the negativity with which the students viewed physical education was consistent and demoralizing. It was refreshing to hear their excitement and enthusiasm, therefore, as they described physical education classes in which they actually had fun. As previously mentioned, for all the students there was a strong link between having fun in physical education and being with their friends;

"like this year is a lot of fun because we have a lot of friends in this class"

(Tiffany). Jay agreed, "if some of your friends are there then it's more

enjoyable." Dave expressed a similar feeling and acknowledged that, "about half the time it's [gym] fun depending on who is in your class."

When the students discussed having fun in gym class, they also referred to the fact that their own personal enjoyment largely depended upon the other students in the class. In an attempt to create the most enjoyable experience in physical education, the students suggested that the class should be re-designed. Initially, the re-structuring seemed to be based on the ability level of the students, "she [Ms. Jackson] should teach one group the basic skills so that they know what they are doing but have another group with people who already know what they are doing so that they're not bored with it" (Becky). Becky was adamant in her argument for ability grouping in physical education. She was interviewed with Sean who took the opposite view and stated that in a mixed ability class, "it balances out and you learn more." He could not imagine being a low-skilled student and only being allowed to play with other students of the same ability. As I listened to their discussion, however, I was stuck by the fact that while ability level was important, it was not really the main issue. Instead, the amount of effort exerted by students was the factor which determined in which group they should be placed.

Motivation to participate and the amount of effort exerted by others was mentioned by all the students as a negative aspect of physical education, "I hate it when I totally give my all...and people are just like standing there doing

nothing...and they don't move, they just stand there" (Nicole). Such feelings led to suggestions that physical education class should be divided into two groups, a competitive group for those students who really wanted to participate, and a recreational group for students who were less inclined to exert effort in the game. As Tammy explained, "I don't know if it would be really fair, but like get the real competitive people together and get a real good game going." Jim agreed, "if you're in a gym class where everyone is interested, then it can be fun and a great activity." Such re-organization would ensure, "students get what they want out of gym," (Beth) and "everyone has their own kind of fun" (Nicole).

Several female students rather hesitantly raised the issue of gender as another factor to be included in the re-structuring of physical education. Following their previous comments about feeling excluded by the males in the class Tammy, Tiffany, Beth, and Nicole expressed an interest in single-sex physical education. This comment by Tiffany explains their concerns, "I know that this sounds bad, but even like separate the girls from the guys because sometimes the guys get a little rougher than the girls do."

Contradictions

The second system of student beliefs focused on the importance of having friends in gym class. Again, there are several inconsistencies among the data which reveal contradictions and inconsistencies in the students' thinking and incongruencies between their beliefs and action. First, many of the students articulated their belief that physical education classes should be divided into two groups, competitive and recreational. Closely associated with this belief was the

implication that most students who elected to be included in the competitive group would be more highly skilled than those who opted for the recreational class. When asked which was more important, being with friends or being with students of a similar ability and motivation level, the students emphatically replied that interacting with friends was more important, "I mean you guys are friends and that's not why you're friends. You're friends because you want to be friends, not because one of you is better at something" (Heather). Dave explained that if there was a difference in ability or motivation, "that would be OK, because I mean there's some compromise in there." The students exhibited strong loyalty to their friends, and while they articulated the belief that physical education classes should be divided into competition or recreation, they would rather be with their friends regardless of ability level or amount of effort exerted.

The students also indicated that they would self-select to be included in the competitive class. This was even true of the students who complained that gym class was too competitive and that competition detracted from their enjoyment of the activity. Again, if their friends were to be in the competitive class, students would forego their own preferences so as not to be left out or isolated. The students' decision to self-select to participate in the competitive class is of further interest in light of my observations. Sylvia often had little intention of contacting the ball, Cathy was hesitant about becoming involved in team handball, and Heather waited until the ball came close to her rather than moving to intercept a pass. Despite an apparent lack of motivation on the part of these and some other students in the study, they all would select the to be

included in the competitive group given the option. Such a decision further supports the idea that these students hold inaccurately optimistic perceptions of their own ability, participation level and performance.

As previously noted, students mentioned the importance of meeting new people in their physical education classes, but while the value of such interactions was apparent, the depth of these newly formed relationships was seemingly shallow. As Nicole said, physical education, "joins you together in a way because...you can't not be nice to a person on your team," but being 'nice' did not necessarily constitute actively ensuring that they were included in the game. On several occasions new acquaintances who were included in drills were then overlooked in favor of closer friends in the game situation.

During several conversations about interaction, the students were quick to condemn exclusionary behaviors which led to students being left out during a game. Interestingly, however, during these discussions each student reverted to speaking in the third person and talked about how their peers excluded other students in the class. Never once did they acknowledge that perhaps they were excluding others. It seems as though exclusionary behavior can be identified in others, but nobody was willing to accept responsibility for their own behavior.

The female students in the study were very vocal about their frustrations of being left out by the males in the class, yet on several occasions the females really did not want to be involved. For example, Nicole who was often a very active participant sometimes did not want to receive the ball in team handball, especially if she had to take a shot on goal. Similarly, Beth described how she

determined her own involvement in whatever game was being played, and controlled to an extent the amount of times she was passed the ball, "sometimes I'm really not interested because sometimes I really don't want the ball...so I think that it doesn't really happen unless I want it to....Certain times even though I'm active I don't get passed the ball...then I'll get mad." From these comments and my observations, it seems as though the females reserve the right to self-exclude but yet expect the males to know when they are ready to re-enter the game.

Finally, on the surface there seems to be a contradiction between the belief systems. The comments made in relation to the first system can be characterized by a tone of disillusionment. Physical education was viewed as a necessary evil, an irrelevant hoop through which students had to jump before graduation. When the students began to talk about their friends and the social aspect of physical education, however, they were quite excited about the class because it provided the opportunity to socialize. Unfortunately such excitement was relatively short lived as the students explained that attending physical education class was still considered to be a chore, but they managed to make the best out of a bad situation. As Jim explained, "it's kind of like socializing but playing the game to make it look like we're doing something," and Dave concluded, "it has to be fun or there's nothing else to it."

The Influence of Context on the Translation of Beliefs into Action

The structure of physical education at Colonial High School lent support to the students' belief system which focused on interacting with other students.

The time allocated for changing both prior to and following a physical education class provided ample opportunity for students to socialize. In the female lockerrooms, even though specific lockers were assigned, friends changed close to each other and waited until all members of the social clique were dressed before the group as a whole entered the gym together.

While waiting for class to begin, groups of friends sat next to each other on the bleachers and chatted, they ran laps together and stood close to each other during the stretches. When it came time to practice drills in volleyball, friends congregated together and were never separated by Ms. Jackson. In volleyball, and even in team handball when Ms. Jackson chose teams, students still remained together in their social groups. As Jim said, "students tend to bag to get into their own team...at the beginning of class we'll stand in a little circle and she'll [Ms. Jackson] will take a whole mass of kids and put them on one team." This strategy worked because in the 20 lessons I observed over the two units, Dave, Cathy, Jim, Jay, and Sylvia were always on the same team.

The sign-up procedure for each unit also created an opportunity for students to ensure they were with their friends in physical education class. When asked how they elected which activity to take, the students explained a three-tier hierarchical selection system. The most important aspect of selection (tier one) was that they would be with their friends. The second criterion for selection was the activity itself (tier two), but if the choices were of equal weighting, they finally chose by teacher (tier three). Prior to the actual sign-up, groups of friends sat together in the bleachers and discussed the different

activities: "Well, you talk in the bleachers and choose between the different sports and then go from there" (Tiffany).

The students in a social clique were fiercely protective of their friends and employed strategies to ensure that no one in the group was on their own in a physical education class. If there was not enough space in one activity for the whole group or if some students really expressed a desire to participate in a different unit, others would sacrifice the activity to ensure their friends were not alone; "sometimes the group of us will split up into two smaller groups if we like different things" (Dave). The students who were not members of a particular social group, at least in the units I observed, elected units based on the second two layers of the hierarchy. For example, Sean, Nicole, and Heather all elected units based on the activity, but if the activities were similar then they chose by teacher, "I would choose it for the activity...but if there is the choice between two really good activities...I would definitely go for the teacher" (Nicole).

As a result of being with their friends there was a great deal of laughter in the groups. It seemed as though the laughter took two main forms, genuine enjoyment and lack of seriousness. Jay and his friends teased one another with fake passes in volleyball drills and had good natured disputes about foul shots and line calls. In contrast, Tammy and Tiffany rarely took physical education class seriously and their infectious laughter was associated more often with immature, childish behavior. Whichever form the laughter took, it supported the notion that, for these students, interacting with friends was the greatest contributor to having fun in physical education class.

When the students were on teams or performed drills with their friends they ensured that all members of the group were included in the action. Students who were not part of the social clique, however, were not really welcomed into the group. While the students never admitted to behaving in an exclusionary manner themselves, they were able to identify such behavior in others and it was certainly apparent in the classes I observed. In a volleyball class Nicole was asked to join Tiffany, Tammy and their group of friends. Nicole was not part of that social group and while her presence was acknowledged, she was not included in conversations and rarely touched the ball during the drill. During interviews both Tammy and Tiffany explained the importance of having friends in class and feeling included, "it's good to have someone [a friend] in class instead of just standing there by yourself, sometimes you feel awkward" (Tammy). They did not, however, take steps to alleviate another student's isolation in drills.

Another aspect of student behavior which reflected an underlying belief was that the female students were quick to express their frustrations when the guys did not pass them the ball. In team handball Nicole complained, "I'm sick of guarding Alyssa, she never gets the ball." This and other such outbursts in class led to several discussions about the number of times the girls received the ball. These conversations often overflowed into the lockerrooms and were not confined to the units I observed. For example, Tammy and Tiffany elected to participate in indoor soccer instead of team handball and on several occasions entered the lockerroom complaining about the fact that the guys did not pass

them the ball. In an interview, Tammy referred specifically to indoor soccer when she said, "there's like five girls in the class and the guys won't pass (to us)."

When comparing the influence of context on the two student belief systems discussed, an interesting contradiction arises. The two systems are essentially different in both tone and content and yet both are supported by the context of physical education at Colonial High School. The fact that physical education is mandatory and students have to attend classes in order to graduate seems to conflict directly with their beliefs about the importance of physical education. Yet, for the most part students' beliefs are actually supported by other contextual factors such as structure, repetition, facilities, and parental values. Further, given the condition of mandatory class attendance, the students in this study 'lived through' physical education by focusing on the social side and they manipulated the context to ensure that they spent as much time as possible with their friends. The need for contextual manipulation was limited, however, as the atmosphere and learning environment seemed designed to encourage socializing.

Teacher's Beliefs

The previous section described the students' belief systems, their respective contradictions and the contextual factors that influenced the translation of beliefs into action. The focus of this section, therefore, is the discussion of Ms. Jackson's beliefs about physical education. The students in this study were candid about the lack of importance of physical education in their

lives; it was not a priority and they spent little time or energy thinking about it. In contrast, Ms. Jackson has chosen physical education as her career, has invested time in preparing to teach, and has spent the last 21 years teaching physical education at Colonial High School.

As I examined Ms. Jackson's beliefs, it became apparent that they were not going to form clear, distinct, and compartmentalized systems. Rather, her beliefs reflected a complicated, multi-dimensional system developed through 21 years of teaching experience. Physical education is an important part of Ms. Jackson's life and as a result, her beliefs about the subject are complex, well developed, and inextricably linked.

The beliefs held by Ms. Jackson form a large, intricate system which has at its core the belief that, "physical education should provide an equitable environment for all students." In the following sections this belief system is dissected into two dimensions which are described independently, although the strong inter-dimensional connections are also discussed.

The following narrative describing Ms. Jackson's beliefs was developed from the data and presented to Ms. Jackson in the fourth interview (see Appendix L). I included the entire narrative here to provide an understanding of the breadth and depth of the beliefs Ms. Jackson holds and also as a prelude to my visual interpretation of her beliefs.

I believe that my role as a physical education teacher is to create a safe atmosphere in which students feel good about themselves and also experience some degree of success in physical activity. I believe that if a

teacher keeps students excited and turned on to the activity, they will pick up the skills as they participate. I see the focus of physical education being much more around the students' self-esteem and how they feel about the activity rather than developing the perfect set in volleyball, for example.

I believe in a recreational approach to physical education in which the students are introduced to as many activities as possible. There are no specific skill demands or a rigid skill sequence. I want the students to enjoy the activity so they will pursue it after school and challenge themselves to acquire more skills. I believe that sometimes we have to trade off maximum participation for exposing the students to different activities.

In physical education issues of self-esteem and body image can affect whether or not students enjoy the activity. I encourage students to be positive about their body image and I try to teach about interpersonal relationships, self-esteem, and life skills through activity.

Students should be held accountable for treating each other with civility and respect. Each student, irrespective of skill level, should have an equal part in participation and enjoyment of activities and the support of their peers. Physical education should be a safe environment for **all** students. If students choose not to participate within these groundrules, they should take responsibility for that decision. I believe that a teacher

should have established consequences for inappropriate behavior, but these should never include being derogatory to students.

I believe in personally communicating with as many students as possible each class and I try to be sensitive and inclusive with my language. Teachers have a strong impact on students and a flippant comment said in jest can really affect a student's attitude towards physical education.

Physical education should be mandatory for all high school students. Their level of maturity changes so much and if it were an elective I think we would lose some students in their junior and senior years, the time when physical education may become more meaningful and relevant for them. I realize that sometimes physical education is at the bottom of the students' agenda when compared with other issues in their lives. These students often need the most compassion and not the heavy hand.

Ms. Jackson's beliefs expressed in the narrative are all interconnected in such a way that separating them, even diagrammatically, is difficult.

Consequently the diagrams preceding each section represent one dimension of the same system and both have the same core belief (physical education should provide an equitable environment for all students) which organizes the other beliefs in the system.

Physical Education Should Provide an Equitable Environment for All Students

(Dimension One)

Figure 5 illustrates the first dimension of this belief system which is the most powerful and perhaps can be considered the core dimension of this large system. The core belief, enclosed in the oval, is illustrated in capitals and bold lettering and serves to organize the other beliefs within the system. Beliefs written in capital letters but not in bold seem to help in the organization of the system. They are not core beliefs as their existence is contingent on the core belief itself, but they are organizationally influential and more passionately held by Ms. Jackson than other beliefs in the system. Consequently, they form the headings under which this dimension of the belief system is discussed. (The numerical labeling is to assist identification and is not a priority order). The beliefs surrounded by the dotted lines form links to the next dimension of the system and will be discussed in detail in the next section.

Physical Education Should Provide a Safe Atmosphere for All Students

Ms. Jackson firmly believes that physical education should be a safe environment for all students, and in this context safety includes both physical and emotional factors. Physical education should be a place where students are not in physical danger due to inappropriate clothing (e.g., hats are not allowed to be worn in class). Another potential threat to physical safety occurs when less motivated students interact with a highly competitive, over-zealous team.

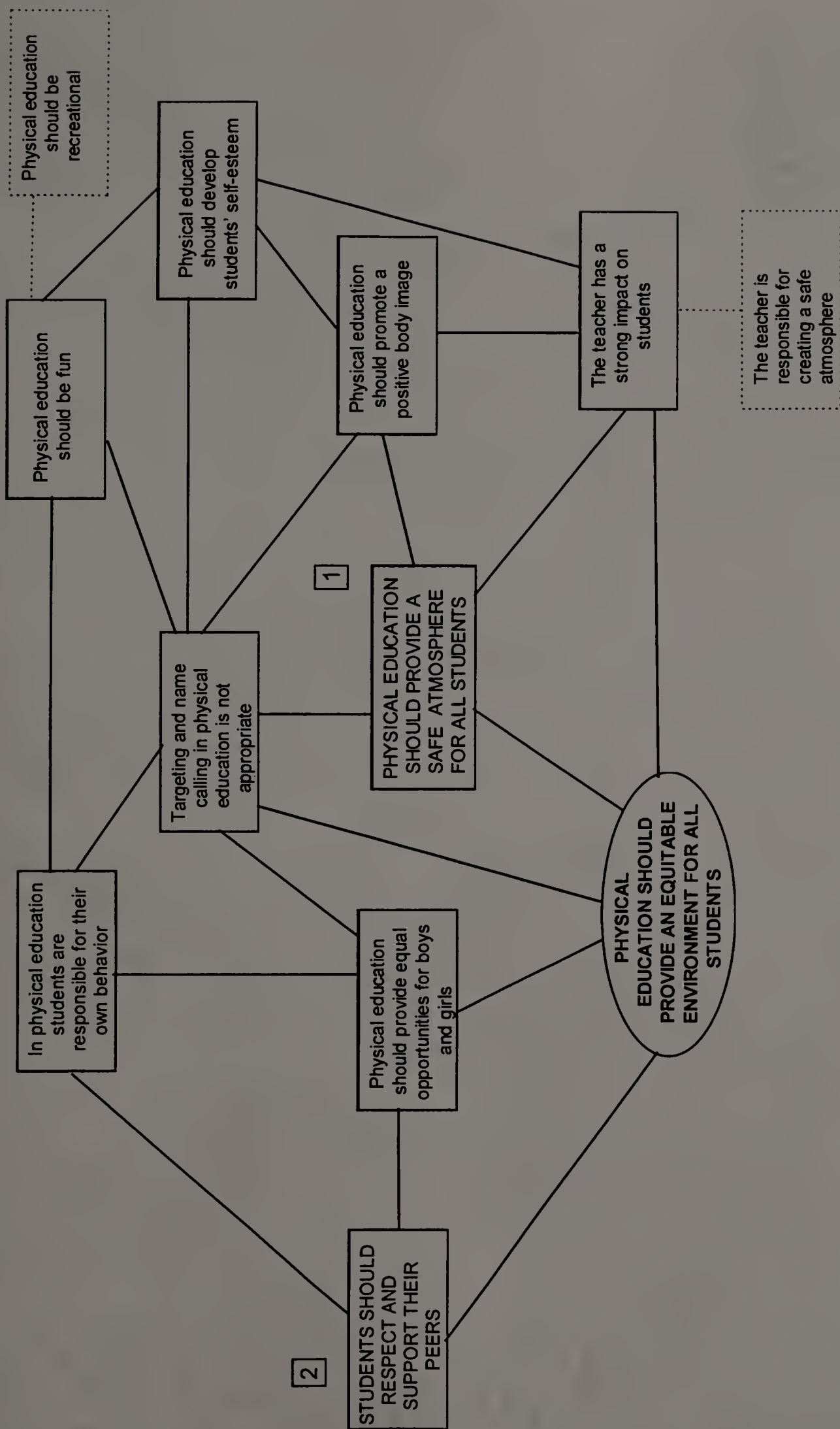


Figure 5. Teacher belief system (dimension one)

Consequently, Ms. Jackson groups students accordingly, “splitting up the more aggressive players and putting them with the more passive players so you don’t have a zombie team playing against world cup potentials.”

While physical safety is important, Ms. Jackson’s major focus is the emotional safety of students in her class with three factors emphasized: self-esteem, body image, and targeting and name calling. She defines targeting as student initiated verbal or non-verbal behaviors which inappropriately criticize or alienate others in class.

Ms. Jackson believes that physical education is, “much more geared toward developing self-esteem and being concerned about the comfort level in the class than it is just ‘these are your drills today, let’s get through them because I had seven and I want to get all seven in!’” She is concerned that the messages students receive from a variety of sources including the media and society are, “not that great,” and hence their self-esteem is relatively low. As a result, in physical education the development of self-esteem, “is a big, big, big issue.”

To promote the development of self-esteem, Ms. Jackson believes that physical education should encourage the students to have a positive body image as, “there’s a high percentage of students that feel they’re not happy with their body.” The importance of this belief became clear when Ms. Jackson explained what she wanted the students to learn from her class, “I guess the biggest thing is to learn to feel very positively about their body and activity.” While Ms. Jackson acknowledged the importance of body image, she also explained that

this particular belief is difficult to transfer into action or to assess as a component of learning. It is difficult to openly encourage students to feel positive about their bodies, hence she hopes that body image will be unconsciously developed through creating a sense of safety in the class. For example, Ms. Jackson hopes that if physical education provides an equitable environment in which students feel safe, their self-esteem will increase which in turn will influence perceptions of their own body image.

As previously mentioned, Ms. Jackson indicated that students receive subtle messages from the media about who they are and how they should look. She also believes, "they get messages from us (teachers) too and there's no way around it." Ms. Jackson believes that teachers have a strong influence on students: "I have this idea that we have this incredible impact. And there are certain things that we say in one split second that in four years we'll never be able to recover a student." She believes that it is her responsibility as a teacher to create and maintain a safe atmosphere in physical education and as a result, Ms. Jackson tries to be inclusive with her language and ensure that she interacts positively with as many students as possible in each class. (Ms. Jackson's beliefs about teacher responsibility are developed and explored at length in the second dimension of the belief system).

The third aspect of safety in physical education is the reduction and preferably elimination of targeting and name calling in class. Such behavior is usually the result of a lower skilled student being teased by peers, or the boys in the class making derogatory comments about the girls. With regard to skill level

Ms. Jackson tries hard to set, "a tone where you're trying to prevent any emotionally unsafe behavior, targeting, and harassment because of skill level...if you have students in the class who are not as skilled as others that doesn't mean that they can't have equal part in the participation or the enjoyment." In class Ms. Jackson is quick to address derogatory comments made by the students, and frequently they react by explaining that the comments were only made to a friend in jest. Ms. Jackson responds to their pleas of innocence by reminding them of the possible negative effects their comments may have on other students in the class, "if you are saying to your friend who's one of these model athletes... 'what a geek, hey fatso pass the ball,' what does that say to the other kids who are looking at that?"

The second reason students make derogatory comments to each other usually involves the comparison of boys and girls. Ms. Jackson firmly believes that physical education should provide equal opportunities for boys and girls, but believes that girls still frequently are considered to be less skillful in physical activities. Although situations of gender discrimination were not common in the classes I observed, there were occasions when the boys did not pass the ball to the girls and at one point a male student teased his friend for allowing a girl to score past him in team handball. Ms. Jackson addressed all of these situations immediately through discussion and clear explanation of why the behavior was inappropriate.

Students Should Respect and Support Their Peers

Ms. Jackson's beliefs about safety in physical education were strongly linked to her belief that the students should respect and support their peers. She acknowledged the importance of peer group interaction for students by suggesting that at the high school level, "that's important to them...their interaction with their friends, right now that's their only support group." Consequently, the actions of peers are very influential on the attitudes students have toward physical education. Ms. Jackson explained, "it's not like phys. ed. is 'yucko' because they have to change and they have to be active. It may be 'yucko' because there are some people in their class who are totally incapable of being sensitive or compassionate."

To emphasize the importance of peer interaction, at the beginning of each unit Ms. Jackson stresses the need to be respectful and to treat others with civility. She also articulates her belief that the students are responsible for their own behavior and choices, referring to any decisions to target or harass other students and also their decision to become actively involved in the class. The consequences for the former have already been discussed, but Ms. Jackson also expects, "that everyone should be equally involved and obviously that doesn't always happen. But I think that what you do suggest is that if they are not equally involved then some of the onus may be on them individually."

The students in Ms. Jackson's classes are encouraged to take responsibility for their own involvement and treatment of others. Ms. Jackson believes that such behavior helps to create a safe atmosphere which in turn

contributes to making physical education fun for all involved. As she explained, "if people feel safer in class they're going to have a better time." I asked Ms. Jackson how she establishes whether or not the students feel safe in her class and she stated, "there's a sense of that by the number of students who choose to participate or not participate, so you can tell what the safety level is like for them." In the classes I observed there were usually one or two students sitting out but the rest all participated with varying degrees of involvement. Using Ms. Jackson's criteria, therefore, it seems as though the students feel safe enough to participate. The mandatory nature of physical education and the fact that students must pass in order to graduate, however, provides another possible explanation for the relatively high participation level. Given the beliefs of the students already discussed, this may be a stronger incentive than the safe atmosphere of the class.

Physical Education Should Provide an Equitable Environment for All Students (Dimension Two)

As previously mentioned, Ms. Jackson's beliefs about physical education form an intricate, multi-dimensional system, and Figure 6 represents another dimension. As this is a dimension of the same overall system, the core belief remains "physical education should provide an equitable environment for all students," and is signified by the words "equitable environment" in the center oval.

The diagram represents two sets of interrelated beliefs and the boxes inside the oval illustrate the organizationally influential beliefs for each set. One

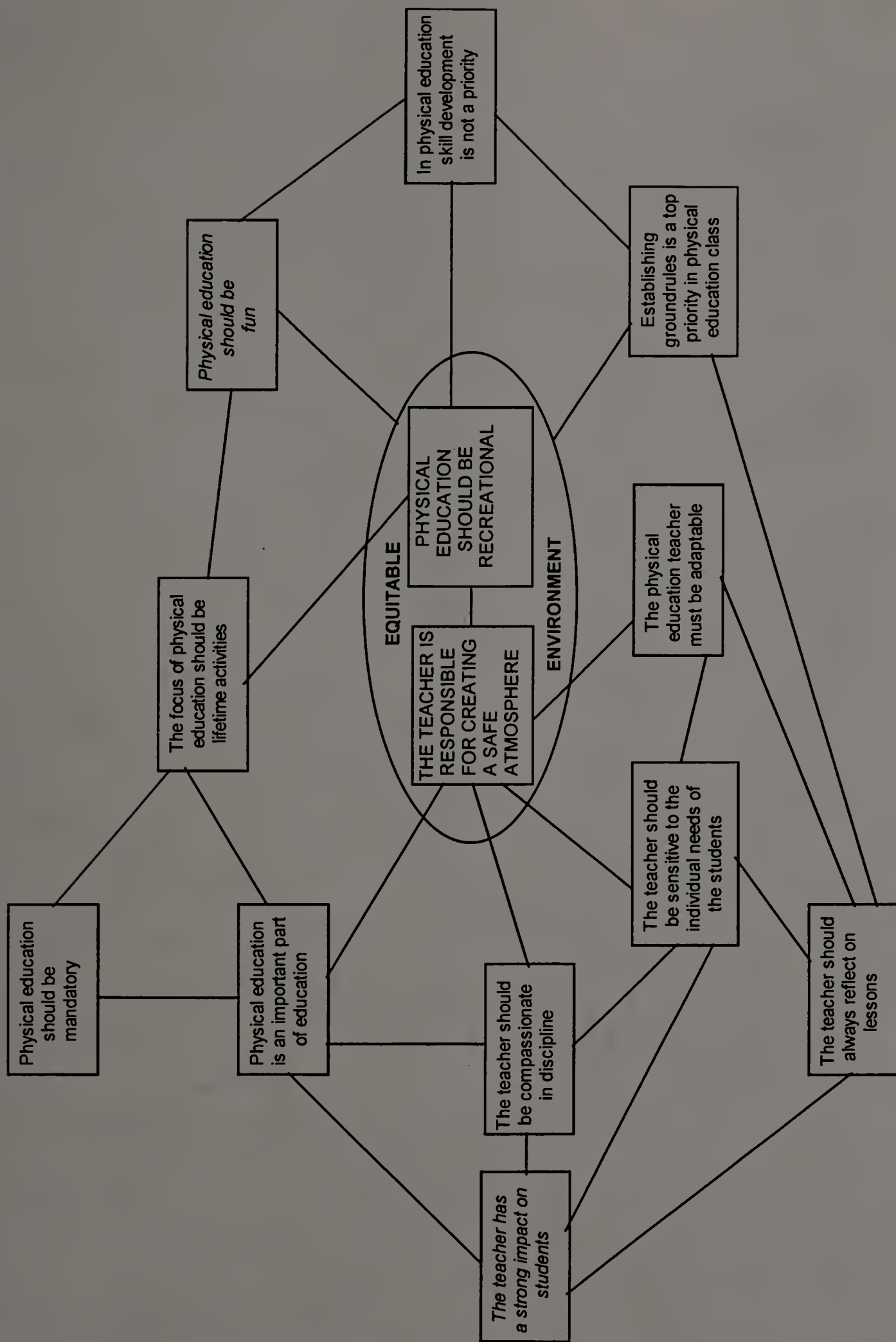


Figure 6. Teacher belief system (dimension two)

set of beliefs focuses on the responsibility of the teacher and is organized around the belief that "the teacher is responsible for creating a safe atmosphere." The other set of beliefs is concerned with the structure of physical education and is organized around the belief that "physical education should be recreational." Some of the individual beliefs directly link to only one of the organizational beliefs, while others are connected to both. As this second dimension is explored, links to the first dimension will be discussed. Two beliefs fall into both dimensions and these are printed in italics.

Physical Education Should Be Recreational

Ms. Jackson believes that physical education should have a recreational focus in which students are introduced to a variety of activities. Through this approach, skill development is not emphasized and it is more important for the students to enjoy participating than it is for them to become skillful movers. Ms. Jackson tries to, "provide a forum where they [students] can improve their skill level and some of the students will take advantage of that and some won't." As a teacher, however, she really does not focus on skills and drills. There were no drills in the team handball unit I observed, and skill practice in volleyball was limited. Ms. Jackson that she places more emphasis on, "the verbal and behavioral things that are going on aside from activity and skill work." In this statement she is referring to the development of self-esteem and reduction of targeting discussed earlier.

While skill development is not a priority, Ms. Jackson firmly believes in the importance of establishing groundrules at the beginning of each unit. The

groundrules she outlines to the students combine issues of civility with activity specific safety factors. Through groundrules Ms. Jackson conveys her expectations for behavior among students by saying, "we have to be respectful...we are not going to use this opportunity to be physically or verbally abusive." As she continues to explain, "the groundrules start off by being much more personal and then they expand to the equipment...we don't kick the volleyball, we don't throw the frisbee into someone's face intentionally." Groundrules formed one of Ms. Jackson's elements in her repertory grid, and one to which she assigned top priority over instruction, activity, warm-up, and on/off task behavior, "I would be more concerned with my groundrules and that people are understanding that we are doing the same things [respect and civility] here as opposed to activity level."

Ms. Jackson believes that through a recreational approach toward physical education in which basic groundrules are established and specific skills are not emphasized, the students will have a positive experience and enjoy participating in activity. She believes that if, "they feel and enjoy being in activity, and enjoy activities," in turn this may lead them to continue participation upon graduating from school. At the high school level, "we are starting to change the focus in activity to the suggestion of follow up and, you know, lifetime types of skills." To that end, Ms. Jackson believes that physical education is an important part of education.

Although Ms. Jackson believes physical education is important, she acknowledged the students' indifference to the subject by explaining, "this is

peanuts to them [the students]...I think they get a lot of information from 14 other places that overrides what we teach them phys. ed. is about." She explained that students say, "I'm dealing with you-name-it and there you are concerned whether I'm gonna change for class." The low ranking of physical education in the lives of her students causes Ms. Jackson to believe that the main thing they learn from taking physical education in school is, "survive it...they learn it's a requirement...you have got to do it...it's not bad most of the time but we [students] should have the choice as to whether we [students] want to take it or not."

Ms. Jackson's belief about the importance of physical education led to a discussion about it being a graduation requirement at Colonial High School. She strongly believes that physical education should be mandatory for all students but acknowledged that if students were given the choice, "their choice would be not to do activities sometimes, and that's not a choice." She predicted that about 30% would elect physical education and that number would include more males than females. Her explanation for the lack of interest in elective physical education revolved around the students' desire to interact with their friends, "it's like if they've got a choice to have two study halls where they can chat with their friends or come down here and play team handball in a class where there's not much talking going on...there's no question." This is an interesting contrast to the students' beliefs about the interactive nature of physical education.

The Teacher is Responsible for Creating a Safe Atmosphere

Students place little value on physical education in comparison with other aspects of their lives. This, combined with their reaction to the mandatory attendance creates unmotivated students who present discipline challenges in class. Dealing with such unmotivated students for whom physical education is not a priority links closely with Ms. Jackson's strong belief that the teacher is responsible for creating a safe atmosphere. Physical education should be a safe haven where students can escape from other pressures and the teacher should be compassionate when dealing with unmotivated students, "these people need the most compassion...not the heavy hand."

As previously mentioned, Ms. Jackson believes that teachers have a very strong impact on students and, therefore, should be sensitive to their individual needs. Such sensitivity includes an awareness of what makes students feel uncomfortable in class such as, "eliminating things where they get singled out as much as possible...so they feel better about the activity." The teacher should also be conscientious in using inclusive language and must never make derogatory remarks which may be detrimental to the student.

Ms. Jackson believes that being sensitive to the individual needs of students requires her to be reflective and adaptable. She reflects on each lesson to identify and develop the positive aspects of a class, while attempting to reduce any negative components. In turn, this reflective process leads to the development of a repertoire of responses and strategies which can then be adapted according to specific situations, "rather than walk out there with one

strategy and if it doesn't work now you're waiting until the next class...you have to struggle through this whole class just because one strategy didn't work."

Reflection and adaptation apply not only to teaching strategies, but also to the establishment of realistic and relevant groundrules, thus forming a link between the two sets of beliefs within this dimension.

In concluding our discussion of teacher responsibility in physical education, Ms. Jackson was emphatic when she described the unwavering responsibility of teachers irrespective of their particular teaching situation. She explained, "I still think we have the responsibility to maintain some kind of standard regardless, I mean it's [physical education] not on the top of the heap...in public education. But I think that these things need to happen regardless of what you have for facilities or what you have for equipment."

The Influence of Context on the Translation of Beliefs into Action

Ms. Jackson is an influential member of the physical education department at Colonial High School who has very strong beliefs about equity in the gymnasium and throughout the school as a whole. Her role in the department combined with her passion for equity has afforded her the opportunity to manipulate the environment to promote equity in physical education and more particularly within her own classes.

At the beginning of each unit I observed, Ms. Jackson talked to the students about the groundrules for the class and her speech focused around physical and emotional safety in physical education. She began by reminding the students not to wear hiking boots or hats as both can be a safety hazard.

She also explained that while the students did not need to be the best of friends they must treat each other with civility and respect. Ms. Jackson also asked the students not to wear items of clothing which displayed slogans that could be offensive to others in the class.

During both units I observed, Ms. Jackson was quick to address any behavior or comments which she deemed to be inappropriate. In one team handball class several girls had not received the ball so she stopped the lesson to discuss why this was happening and how the situation could be changed. In another class a male student commented to his friend, "I can't believe you let a girl get by you." Ms. Jackson immediately called the student to the sideline and explained that his behavior and comments were inappropriate.

When teams were selected for game play, captains were never involved. Usually Ms. Jackson selected the teams by numbering students or asking them to stand on a line and then dividing them into teams from there. She used a variety of strategies, "I don't think there's any set way...I just try to pick teams as quickly as possible balancing the skill level and the motivation level without kids having to feel targeted or left out."

In the physical education department two policies in particular were developed through a concern for equity. First, when the physical education curriculum changed to incorporate student choice of activities, the organization of the elective process was based on equity. The department uses a rotation system in which the students are called by grade to sign up for the activity of their choice. The grade level called first changes for each unit. For example, if

sophomores are called first for one unit they will be called last for the next unit.

Ms. Jackson explained that the department examined the sign-up system, "from an equity point of view, how fair can we be with this because not everyone is going to get their first choice." The result is that students usually get their first choice of activity at least three times during the school year.

Second, skills testing is not a part of the physical education curriculum or grading procedures primarily because, "you've got a student who may not feel very comfortable with their skills and now you're saying, 'OK I'm going to record how many times you can get the ball in the goal out of 10 attempts,'...It's difficult to do that without having a group of students watching." Asking students to perform in front of others might, "exaggerate their discomfort," and consequently the department has eliminated this individual display of ability in favor of a less discriminatory approach to grading. Students are graded on attendance and effort.

Ms. Jackson's belief that physical education teachers should be reflective, adaptable, and sensitive to the needs of individual students led her to ask for feedback from the students in her classes. At the end of each unit she asked the students to write down what they liked and disliked, and what they would change. As she explained, "for some kids the unit would have been fine if we had just washed the scrimmage shirts. 'Well,' I thought, 'that's a simple thing.'" In addition, several years ago Ms. Jackson experimented with a new way of addressing the issue of non-participation. She gave the students a sheet of paper and asked them to explain why they were not participating. The feedback

Ms. Jackson received from this task influenced her future teaching, "I got feedback and some of it was very surprising...a lot of it was 'because kids pick on me all the time.'" This enabled her to become more aware of situations where there was the potential for some students to be targeted, and as she explained, "I think that as time has evolved so has my ability to respond to what makes kids feel terrible in class."

Outside of the immediate physical education environment, Ms. Jackson's beliefs about equity were also apparent. While I was observing at Colonial High School there were two pep rallies scheduled for the boys' football team whereas the achievements of girls' teams were not recognized. In the lockerrooms prior to class, some of the girls were obviously upset by the discrimination and Ms. Jackson spoke with them about different strategies they could take to show their displeasure. Ms. Jackson herself wrote a letter to the administration explaining why she felt the rallies were inappropriate and discriminatory.

Ms. Jackson also described her involvement in other aspects of her life which again reveal her deep rooted beliefs about equity and her willingness to put those beliefs into action. When she first started teaching at Colonial High School Ms. Jackson was also the coach of the girls' field hockey team, a position she relinquished after constantly fighting for equal equipment, facilities, and recognition. As she explained, "I enjoyed coaching but it was really tough to try and walk the tight line of always struggling to get tape because the girls needed tape...while the boys are going through cases of it." After obtaining tenure, she

gave up her coaching position because, "I had to basically misrepresent myself in order not to make the administration look bad, and I couldn't do that."

Ms. Jackson also expresses her beliefs about equity in other forums within the school environment. She is currently the adviser to a group of students concerned with solving problems through negotiations and discussion rather than discrimination and violence. The group's motto is "don't hate, mediate." Ms. Jackson has also written grants to obtain money for text books focusing on equity and escorts students to state meetings concerned with such issues as gender equity and homophobia.

In addition to her belief system, discussions with Ms. Jackson revealed certain assumptions about students which also influence her actions. I deliberately use the word assumption to make a clear distinction from beliefs. While beliefs form a system with an influential center core, this is not true of assumptions. Rather, while assumptions are connected to the same subject (in this case the students), there is no core to organize them into a system. Ms. Jackson's assumptions are important to address because they guide some of her actions.

First, she assumes that high school students, especially juniors and seniors, understand the value of physical activity, "I think they're probably more capable of understanding the carry over, the follow through component of it, so it is much more of a personal relationship to the activity where I think at the lower levels it's just activity." This assumption, largely erroneous given the beliefs of

these high school students, may account for the fact that Ms. Jackson does not address the value of physical activity for the future in her classes.

Second, as Ms. Jackson explained, "it took me a long time to recognize that some kids are electing to fail and that's their choice. Some kids will say, 'I'm going to get an A,' and some kids will say, 'well I'm going to get an F.' And some of them will put the same kind of effort into each and no matter what you do, they are going to work just as hard to get that F." Ms. Jackson's assumption that some students will deliberately elect to fail surprised me given the mandatory nature of physical education at Colonial High School. In the classes I observed the students seemed to have accepted the fact that graduation was more important than failing physical education although some of the students were reluctant and resigned participants.

Finally, Ms. Jackson held related assumptions about the importance of physical education in the lives of her students and how that would translate into their participation in an elective program. She maintains that students place little priority on physical education and a low percentage would elect to participate if given the choice. This assumption is supported by the information provided by the students.

Contradictions

Ms. Jackson's beliefs about physical education form a system which focuses on the fact that physical education should provide an equitable environment for all students. While Ms. Jackson's belief system is larger and more intricate than those of her students, the data revealed fewer contradictions.

For the most part, Ms. Jackson clearly articulated well-developed and consistent thoughts which were congruent with her actions.

The main contradiction seems to be that Ms. Jackson believes physical education should be fun, and yet also mandatory. For a variety of reasons some students will never enjoy physical education and requiring them to participate, therefore, immediately creates hostility. Similarly, Ms. Jackson is very concerned about creating an atmosphere in which the students feel comfortable in physical education. Some students may never feel comfortable and requiring attendance will only exacerbate the situation.

On several occasions Ms. Jackson articulated the fact that physical education is a low priority in the lives of students and yet she also stated that it becomes more personally meaningful to them at the high school level. This contradiction was highlighted by Dave as he responded to Ms. Jackson's belief statement disguised as that of a candidate for a hypothetical job at Colonial High School. He discussed the paradox by explaining, "the teacher said that it's [gym] a small thing compared with other issues but yet it's meaningful and relevant [to juniors and seniors]...how could it be real meaningful and relevant and yet be a small issue?"

Finally, a contradiction exists between what Ms. Jackson wants the students to learn and what she believes they actually learn. Her focus for learning is developing a positive body image and enjoyment of activities, but she believes the students only learn how to survive the drudgery of physical education class. Although she acknowledges this possible discrepancy, Ms.

Jackson does little to actively encourage the students to develop a positive body image. Further, her understanding of student learning may be largely inferential as classes are graded solely on participation and effort, with no measure of learning employed.

To summarize, Ms. Jackson's beliefs about physical education form an intricate, clearly articulated system comprised of two dimensions. The core belief for the whole system is, "physical education should provide an equitable environment for all students," which influences and organizes the other beliefs. In addition to the belief system, discussions with Ms. Jackson revealed certain assumptions about students which also influence her actions. Overall, Ms. Jackson's role in the physical education department and her willingness to clearly articulate her views help manipulate the context to facilitate the translation of her beliefs into action.

A Comparison of Teacher and Student Beliefs

The final section of this chapter is devoted to comparing Ms. Jackson's beliefs with those of her students (See Appendices K and L for belief statements returned to the participants). Included is a discussion of the similarities and differences in beliefs drawn from the data already presented which is supported by further examination of the repertory grids. Additionally, the students' reactions to Ms. Jackson's beliefs and her reaction to the students' beliefs are explored.

From the data presented in this chapter, several key differences between teacher and student beliefs about physical education seem apparent. The first

and fundamental difference is that the students believe physical education is not important now or in their future. This belief is so strong that it forms the core of a system which organizes and influences all other beliefs within that same system. This core belief drives students' actions in physical education class, influences the pejorative language they use to describe physical education ("gym class"), and supports their reluctance to attribute anything positive to physical education as a school subject.

In contrast, Ms. Jackson believes strongly in the importance of physical education as a school subject. She maintains that it presents students with activity options for the future and helps them develop self-esteem which will be beneficial throughout life. Ms. Jackson, however, expressed little surprise at the students' belief that physical education is not an important aspect of their schooling. She explained, "If we (physical education teachers) are having difficulty justifying physical education to our administration and to our colleagues...it would make sense that the kids are getting the same information." She attributed some of the students' apathy towards physical education to the fact that they are adolescents and added, "they (students) feel like they are wasting their time, but I don't think that's an uncommon thing for adolescents to feel when they are doing something that's not like their choice."

Second, and closely linked to teacher and student beliefs about the importance of physical education, are beliefs about whether or not it should be mandatory in school. Ms. Jackson firmly believes that as a school subject, physical education should be mandatory for all students, while the students'

beliefs in this area can be summarized by Sylvia's outspoken reaction, "this mandatory thing is just way out of hand!"

Third, when Ms. Jackson discussed her beliefs about student learning she focused on the more intangible aspects of physical education such as encouraging a positive body image and developing self-esteem. Becoming skillful in specific activities was not a priority in her classes. Conversely, the students' definition of learning focused primarily on skill acquisition. The students maintained that they do not learn anything new in physical education and they attribute their sports skills to participating in activities outside of school. Since their teacher places little importance on skill development, the students' belief about the negligible amount of learning in physical education class is understandable. This explanation, however, is complicated by the fact that students maintain Ms. Jackson does indeed focus on skill development, occasionally almost to the exclusion of game play.

Ms. Jackson offered another explanation for her students' beliefs about learning in physical education. She suggested that if the students strongly believe physical education is of little importance, by definition, they cannot admit to learning anything in class. The students' view of learning is an example of the powerful nature of beliefs which filter out contradictory information in order to uphold the structure of the belief system. In this case, since physical education is not important, students' believe they cannot be learning anything in class, and therefore, their skills must be acquired elsewhere.

Fourth, the focus of Ms. Jackson's belief system was providing an equitable environment for all students. This core belief was expressed throughout our conversations and was also manifested in her actions in class. One aspect of providing an equitable environment was creating safe atmosphere for students which Ms. Jackson believes is the responsibility of the teacher. The components of a safe atmosphere include developing self esteem, encouraging the students to have a positive body image, and reducing targeting and name calling to enable students to feel comfortable in class. The students, however, equated feeling comfortable in class with being with their friends and they did not mention the development of self-esteem until they were asked to react to Ms. Jackson's belief statement. At this point several students agreed that self-esteem was an important aspect of physical education, but obviously not important enough for them to consider without prompting.

Fifth, Ms. Jackson believes that teachers have a strong impact on students, whereas most of the students explained the role of the teacher as little more than a referee who was largely superfluous to the class. Interestingly, Ms. Jackson reacted to this belief by stating, "I can see that the way our program is run that [teacher as referee] very clearly would be a perception I would have if I was in my class." While she understood the students' belief based on her own actions and those of other teachers in the physical education department, Ms. Jackson maintained, "I see being a referee as being a rigid implementer of the rules and [but] I basically am trying to facilitate a positive experience." While Ms.

Jackson distinguished between the rigidity of a referee and her own teaching role of creating positive experiences, the students did not.

Repertory Grid Data

The differences between teacher and student beliefs are supported in the data provided by the repertory grids. While these data have been integrated throughout this chapter, they warrant particular attention at this point as one aspect of repertory grid completion was specifically designed to explore similarities and differences between teacher and student beliefs.

As explained in Chapter III, the teacher and students were independently asked to develop a list of characteristics of physical education class which then formed the elements of their respective repertory grids. The students each completed a single grid while Ms. Jackson was asked to complete two grids; the first using her own list of elements and the second using the elements provided by the students. The purpose of requiring Ms. Jackson to complete the second grid was to facilitate comparison between her responses and those of her students.

When the grids were completed they were entered into the computer program REPGRID (Shaw, 1986) for analysis. The program uses several analytical procedures to produce three types of representations of the repertory grid: *display*, *mode*, and *focus*. (For details of this analytical procedure, please refer to Chapter III). To create the *display* grid, the program produces a computerized version of the original data. To develop the *focus* grid, the program re-arranges the elements and constructs from the *display* grid to ensure

that the elements similarly viewed by the participant are located close to each other. Additionally, the constructs used in a similar manner are located close together (See Appendix M for examples of *display* and *focus* grids). The students' repertory grids were reduced to a single *mode* grid using the SOCIOGRID computer program (Shaw & McKnight, 1992). The *mode* grid represents the constructs most frequently used by the students and can be represented in *display* or *focus* form.

Figure 7 represents the students' *mode* grid in *focus* form, while Figure 8 illustrates Ms. Jackson's *focus* repertory grid using her own elements. Ms. Jackson's *focus* grid using the students' elements is presented in Figure 9. In all three figures, the elements (characteristics of physical education as stated by the students and teacher) form the lower list of words in capital letters, while the constructs (words or phrases used to describe the elements) are in lower case and written on either side of the grids.

As discussed earlier (see Chapter III), the premise of Kelly's (1955) repertory grid is that the constructs are bipolar in nature. In effect, they form opposite ends of a continuum along which the elements are then placed. For example, in Figure 7 the students' created the construct at the top of the grid using the two poles, 'pace change' (left pole) and, 'more excitement' (right pole). They then assigned the left pole with the value 1, and the right pole with the value 5. The students then rated the elements on a five point scale according to their relationship with each pole. In this case, they assigned, 'changing clothes' the number 2, indicating that it relates more strongly with 'pace change', while

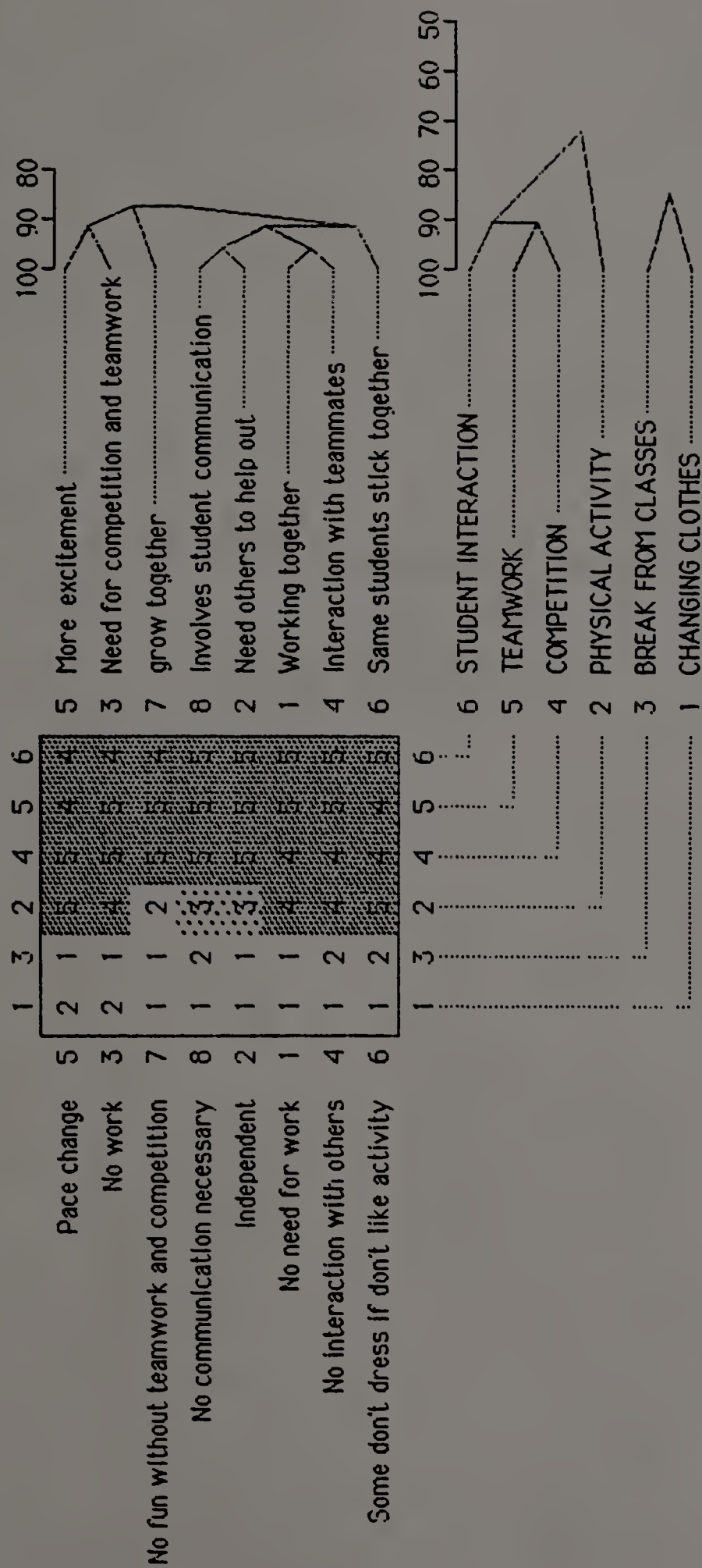


Figure 7. Students' mode grid in focus form

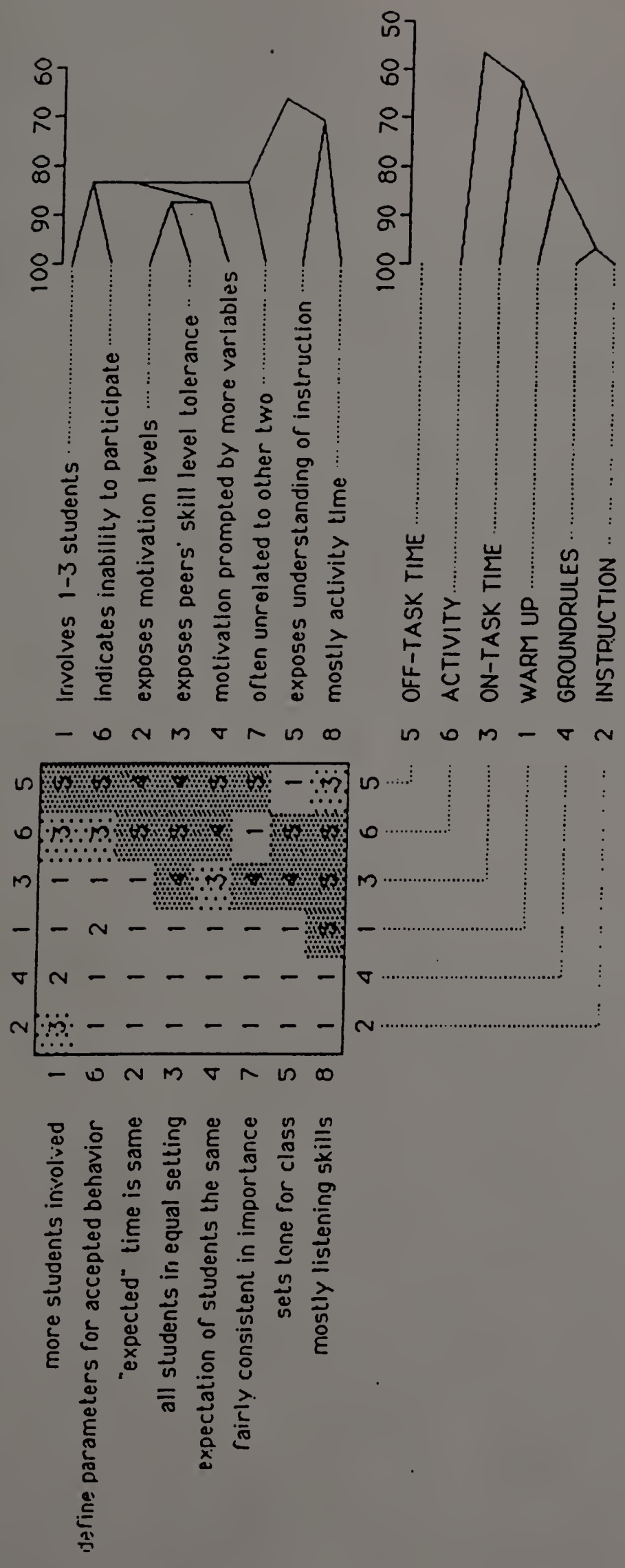


Figure 8. Ms. Jackson's grid in focus form

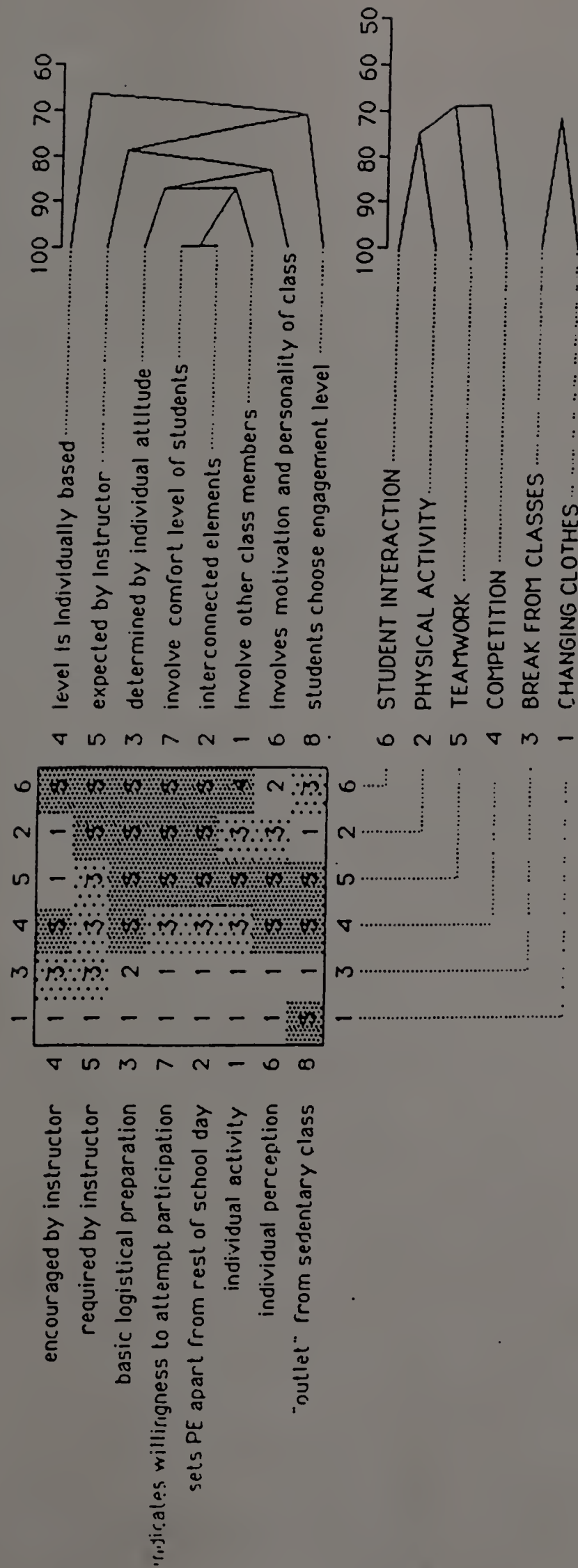


Figure 9. Ms. Jackson's response to the students' elements in focus form

'student interaction' was assigned the number 4 relating it to 'more excitement.' The shading in the grid also corresponds with the students' ratings of the elements. For example, 'student interaction' was assigned the value 4 and is illustrated by darker shading which links it both numerically and visually with the right construct pole.

The following description explains how the grids can be interpreted. Care must be taken, however, when interpreting the grids since, "the meaning is not in the grid, it is in the head of the [participants]" (Beail, 1983). For this reason, the grids were returned to the participants for their interpretations which were then included throughout the results presented in this chapter. While the details of grid interpretation relate specifically to Figure 7, the basic premises also apply to Figures 8 and 9.

Students' Mode Grid

As previously mentioned, the *focus* grid arranges the elements so that those viewed in a similar manner are located close together. In Figure 7 the elements form two distinct clusters. The top cluster contains 'student interaction', 'teamwork', 'competition', and 'physical activity', while the lower cluster comprises 'break from classes' and 'changing clothes'. The strength of the links and hence the similarity between the students' view of the elements is shown by the length of connecting lines in comparison with the numerical scale. While percentages per se are not used to discuss the links between the elements or constructs, the values on the numerical scale do range from 100 - 0 and are, therefore, similar to percentages. The strongest possible link is a

vertical line at the 100 value which would indicate that two elements (or constructs) are viewed as being identical. In Figure 7, the strongest links are among 'student interaction', 'teamwork', and 'competition' with a value of 90. 'Physical activity' also links to that cluster, but with a lower value of 70.

The same principal is applied to the links between the constructs on the upper part of the chart, with the strongest connections being, 'no communication necessary-involves student communication' and 'independent-need others to help out', and 'no need for work-working together' and 'no interaction with others-interaction with teammates'. Again, the strongest possible link is 100, indicating constructs which are viewed identically. That all the construct links are higher than 85 indicates that the students made little discrimination among the constructs.

Such strong similarities are also highlighted in the actual body of the grid. The shading corresponds to the number assignment provided by the students for each element in relation to each construct using a five point rating scale. The darker shading indicates an assigned value of four or five while the lighter shading represents the value three. Unshaded areas correspond to a rating of one or two. The shading, therefore, provides visual confirmation of the numerical assignments for each element. The shading in this particular grid (Figure 7) illustrates that the students used the constructs very similarly to order the elements as there is a uniform, definite distinction between the right and left sides of the grid. This sharp distinction corresponds with the separation of the two element clusters discussed earlier. For example, the students view 'break

from classes' and 'changing clothes' as being similar in relation to all the constructs as illustrated by the numbers in the grid and the shading pattern. Taking this explanation one step further, 'break from classes' and 'changing clothes' are viewed as being similar to the construct poles on the left of the grid, while the other elements are similar to the construct poles on the right. Such interpretation was verified by the students in all the phases of data collection as they described the importance of student interaction in terms of working together, helping each other out, communicating, and sticking together.

Teacher's Repertory Grids

By applying the same interpretation principles, examination of the elements in Figure 8 reveals that Ms. Jackson views 'groundrules' and 'instruction' as being very similar. She clearly distinguishes among the other elements, however, as evidenced by the longer linking lines and the smaller numerical associations.

The constructs at the top of the chart essentially form three groups. The top group includes participation and student involvement; the middle group is comprised of motivation, tolerance, and consistency; and bottom group includes activity and understanding. While the shading in the body of the grid is not as distinct as that of Figure 7, the elements of warm up, groundrules, and instruction are more closely associated with the construct pole on the left side of the grid, while the remaining elements (off-task time, activity, and on-task time) are more strongly related to the construct poles on the right side of the grid.

Figure 9 (Ms. Jackson's response to the students' elements) illustrates that the elements form two distinct clusters which match those identified by the students in Figure 7. 'Break from classes' and 'changing clothes' are completely separated from the other elements listed. The construct links at the top form a very interesting pattern. The two constructs in the center of the grid ('indicates willingness to attempt participation-involve comfort level of student', and 'sets PE apart from the rest of school day-interconnected elements') contain identical element ratings as illustrated by the vertical connecting line at the 100 value, and the numbers in the grid. The two constructs seem to form the center of the pattern and the other connections are made with constructs from either side of this imaginary center line. For example, basic logistical preparation-determined by individual attitude is connected with individual activity-involve other class members. Again, the shading indicates that the elements in the bottom cluster (break from classes and changing clothes) are related to the constructs on the left pole, while the elements in the top cluster (student interaction, physical activity, teamwork, and competition) are more aligned with the construct on the right pole.

Comparison of Teacher and Student Repertory Grids

Having explained the mechanics of the repertory grid, comparisons between the teacher and student grids must be explored. Examination of Figures 7 and 8 reveals a difference in the language used by Ms. Jackson and the students as they listed the characteristics of physical education class (the elements). Ms. Jackson focused on the tangible aspects of class including

instruction, groundrules, warm-up, on-task time, activity, and off-task time. The students, however, included the more intangible elements of student interaction, competition, teamwork, break from classes, and changing clothes.

Closer examination of the relationship among the elements in Figure 8 reveals that while there was a strong similarity in the way Ms. Jackson viewed instruction and groundrules, she clearly discriminates among the other elements in her grid and they do not form distinct clusters. In Figure 7, however, students viewed the elements as forming two separate clusters, and the strongest similarities in the top cluster (student interaction, teamwork, and competition) formed the focus of their second belief system.

The constructs used by the teacher and students also reveal difference in language. While a construct is, "a discrimination, not a verbal label" (Fransella & Bannister, 1975), the language used to develop the constructs reveals much about the participants and in this case, highlights the fundamental differences between their beliefs. Ms. Jackson focuses on tolerance, understanding, equality, and consistency (see Figure 8), while the students focused on communication, involvement, interaction, and working together (see Figure 7). Interestingly, the students' repertory grid represents their second belief system and includes little information about the importance of physical education. Perhaps this omission is due to the nature of the initial question when the students were asked to provide a list of characteristics of physical education class. The response required students to examine physical education by

breaking it down into component parts, so discussing the importance of physical education as a whole was not a viable option.

A comparison of Figures 7 and 9 explores how Ms. Jackson views the same set of elements as her students. In both grids, the elements form two distinct clusters and although the links are slightly different, the clusters of elements are the same. Ms. Jackson and her students view a similar link between 'changing clothes' and 'break from classes' and completely separate these two elements from the other four. When asked to describe the relationship between 'break from classes' and 'changing clothes' Ms. Jackson and the students referred to the fact that these two elements are unique to physical education.

The language used in the constructs (lower case letters) further indicates differences between Ms. Jackson and her students. Ms. Jackson's constructs contain varied descriptions including instructor expectations, comfort level of students, and individuality. These constructs reflect her beliefs about the role of the teacher, the importance of a safe environment to ensure students feel comfortable, and the fact that students should be responsible for their own behaviors. The constructs used by the students focus on communication, interaction, competition, and communication which again reflect their own beliefs about physical education.

Finally, similarities and differences between teacher and student beliefs were also illustrated during final phase of data collection when Ms. Jackson reacted to the beliefs of her students and vice versa. When the students were

asked to react to Ms. Jackson's belief statement (disguised as an application for a hypothetical job), their responses were predominantly positive. As previously mentioned, most students disagreed with the fact that physical education should be mandatory and some also indicated that as a school subject it was not more meaningful and relevant to them in their junior and senior years.

Aside from those two points, however, the students were enthusiastic about the teacher's beliefs, which was somewhat surprising considering the contradictions described above. Tiffany explained, "it's like to me what I would want a teacher to be like," while Tammy stated, "I agree with a lot that's in here." Becky followed her adamant disagreement with the belief that physical education should be mandatory by saying, "actually the rest of it is really good," while Jay stated, "this sounds like the perfect gym teacher just about." Perhaps even more surprising was the fact that the students did not connect the beliefs as being remotely similar to those of their current physical education teacher, Ms. Jackson. Nicole emphatically stated, "I think this (the belief statement) is better than what we have, definitely." While I observed Ms. Jackson acting on some of her beliefs, the fact that the students did not connect the belief statement with their own physical education classes indicates that such links obviously are not apparent to them.

While some of Ms. Jackson's reactions to her students' beliefs have been discussed, two of her responses were particularly surprising. Upon first reading the students' beliefs Ms. Jackson commented, "I don't think any of this seems to be particularly new information...maybe one little thing that's surprising is that

there isn't anything that's dramatically negative." The students explained that physical education was not important, relatively useless, repetitive, boring, and unchallenging, yet Ms. Jackson reacted by stating, "they're not saying it's really horrible."! Instead she focused more on the positive aspects of physical education and was quick to highlight the discrepancy in both tone and content between the students' belief systems. Ms. Jackson sarcastically commented, "I think it would be almost impossible to take that first belief system and then read this (second system) and say 'Oh I see what you mean, it [physical education] really doesn't have a whole lot to do with anything, does it?'" Her implication was that physical education must be of some importance if it enables students to be with their friends.

Perhaps Ms. Jackson's ability to dismiss with relative ease the negativity associated with the students' first belief system highlights the powerful nature of her own beliefs. Physical education is an important part of her life and she believes it is extremely valuable to students. Consequently, her defense mechanism for dealing with criticism and negativity is dismissal of such information in favor of more positive comments. An alternative explanation may be the result of the 21 years Ms. Jackson has spent fighting for the status of physical education at Colonial High School. During that time she has encountered an unsupportive principal, a less than effective department chair, and colleagues who would vote to eliminate physical education in favor of retaining high school sports in a budget cut. Being accustomed to dealing with

such overt negativity from others may have increased Ms. Jackson's tolerance for criticism and encouraged her to focus on any positive comments.

Another surprising aspect of Ms. Jackson's reaction to the students' beliefs was her willingness to assign responsibility for the development of their beliefs to circumstances outside her control. On several occasions Ms. Jackson acknowledged that while she disagreed with the students, given their experiences in her class, she could understand where their beliefs had developed. Interestingly though, Ms. Jackson did not offer any possible alternatives for the way in which physical education is taught at Colonial High School, but rather blamed the context for determining and limiting the curriculum. She explained that the scheduling of physical education reduced her ability to sequence classes, and the length of time for each class limited activity choices. Ms. Jackson assumed little responsibility for creating a positive learning environment by stating, "a by-product of what we are forced to do with the curriculum because we can't get the flexibility to be more creative...is that it is repetitive and it is boring and it possibly is unchallenging for a lot of them." This statement directly contradicts her belief about the responsibility of the teacher to provide quality physical education irrespective of contextual constraints.

Summary

In this chapter I presented the results of a study designed to examine teacher and student beliefs about physical education. The results were developed by integrating information from all the sources of data used in this study (observations, interviews, and repertory grids). The results were divided

into four sections: context, student beliefs, teacher beliefs, and a comparison between student and teacher beliefs. Contradictions in beliefs and the influence of context on the translation of beliefs into action were also discussed.

The context included a detailed description of Colonial High School and the small town of Braddan. More specifically, I described the physical education program, department, and personnel and included short profiles of each participant.

The beliefs held by the students who participated in this study were divided into two main systems. The first belief system focused on the fact that students believe physical education is not important now or in the future. This underlying core belief organized and influenced all the other beliefs within that same system. According to the students physical education is not as important as other school subjects, will not help them in their college or career, is not a learning experience, and should not be mandatory.

At Colonial High School, however, physical education is mandatory and students must pass the class in order to graduate. Given this compulsory attendance policy, the students believe that the only redeeming feature of physical education is that they are able to socialize with their friends. This formed the core belief of their second belief system. Being with friends made "gym class" fun by allowing students to feel more comfortable and included in class.

The beliefs held by the teacher (Ms. Jackson) formed a large, intricate, multi-dimensional system which has been developed over 21 years of teaching

at Colonial High School. The core belief of the whole system is that physical education should provide an equitable environment for all students which includes a safe atmosphere in which students respect and support their peers.

Ms. Jackson believes that in order to facilitate an equitable environment, the teacher must create a safe atmosphere in class by being sensitive to the individual needs of the students. She also maintains that a recreational approach to physical education in which enjoyment is emphasized and the students are exposed to lifetime activities will further encourage equity in the class.

The final section of results focused on comparing teacher and student beliefs about physical education, and there were five fundamental differences. First, the students believe that physical education is simply not important whereas Ms. Jackson has made a career of teaching physical education and obviously believes it is an important part of the school day. Closely linked to teacher and student beliefs about importance of physical education are their beliefs about whether it should be mandatory. Ms. Jackson supports mandatory physical education; the students emphatically do not.

Third, the students believe that they do not learn anything new in physical education because all their skills have been acquired through participating in out of school activities. Ms. Jackson, however, takes a different perspective about learning and rather than focusing on the tangible aspect of skill acquisition, her learning emphasis is placed on the development of self-esteem. She believes

that an equitable environment in physical education will enhance students' self-esteem.

Issues of equity form the fourth difference between teacher and student beliefs. While Ms. Jackson believes that equity will help the students to feel more comfortable in physical education, the students attribute their own comfort level to whether or not they have friends in the same class.

Finally, the students believe that the physical education teacher has little impact on them and is nothing more than a referee who is sometimes more of an obstacle than a facilitator in the class. In contrast, Ms. Jackson believes that she has a strong impact on students and that her role is more diverse than that of a referee.

CHAPTER V

DISCUSSION

Introduction

The purpose of this chapter is to make meaning of the data collected by going beyond the words of the participants and the stories they told. I hope to forge links between this investigation and the results of previous studies as a means of explaining the current findings and offering ideas for future research and practice.

This chapter is divided into six sections. The first section provides an overview of the study and a summary of the results. It is followed by a discussion of aspects of the methodology and procedures that, if given a second chance, I would do differently. Section Three provides the context for the discussion. In Section Four, the beliefs of the participants (students and teacher) in this study are compared with those identified previously in the literature and suggestions for future research are discussed. Section Five examines the influence of context. The final section of this chapter provides some conclusions and implications for teachers, teacher educators, and researchers.

Overview of the Study

This study was designed to examine teacher and student beliefs about physical education by addressing the following questions: (a) what beliefs about physical education do the teacher and students bring with them to class? (b) are there differences between the beliefs held by the teacher and those held by the students? (c) what role does context play in facilitating or inhibiting the translation of these beliefs into action?

The participants were Ms. Jackson (a high school physical education teacher) and 12 students (10th - 12th grade) in her class. Data were collected through observations and interviews. I observed two activity units at Colonial High School (volleyball and team handball) for a total of 20 lessons and I used the field notes to create an action profile for each participant. Ms. Jackson was interviewed five times and each student participated in four interviews. Throughout the data collection process, information was returned to the participants for their reactions and responses. The students also were provided with the opportunity to react to Ms. Jackson's beliefs and in turn, she responded to theirs.

From the information provided by the students I identified two belief systems. The first system focused around the core belief that, "gym class is not important now or in the future." The second belief system had as its focus the belief that, "it's really important to have friends in gym class." These two systems were supported by contextual factors and strongly influenced the students' actions in physical education class.

Ms. Jackson's beliefs formed a large intricate system comprised of two dimensions. At the core of the whole system was the belief that, "physical education should provide an equitable environment for all students." The first dimension included the beliefs, "physical education should provide a safe atmosphere for all students," and, "students should respect and support their peers." The second dimension (which had the same core belief) included, "physical education should be recreational," and, "the teacher is responsible for creating a safe atmosphere." Some beliefs fell into both dimensions and served as links within the system as a whole.

There were five key differences between the student and teacher beliefs. First, the students believed that physical education was not important while Ms. Jackson believed it was a vital part of education. Second, Ms. Jackson argued for mandatory physical education but the students wanted it to be optional. The third difference was found in the way Ms. Jackson and her student defined learning and the amount of learning they attributed to physical education. The students defined learning in terms of skill acquisition and believe that they don't learn new skills in physical education, as it is merely a repetition of activities they learned out of school. On the other hand, Ms. Jackson's definition of learning focused on the development of self-esteem and she believes physical education provides a conducive atmosphere for such learning to occur.

Fourth, Ms. Jackson's whole belief system focused on issues of equity, and she believed that an equitable environment will help the students feel more comfortable in class. The students did not mention equity, however, and defined

'comfortable' as being with their friends. Finally, the students believed that physical education teachers have little impact on them in class and describe the role of the teacher as little more than a referee. Ms. Jackson believed that she and other physical education teachers have a strong impact on students.

What I Would Do Differently

The data collection methods in this study were qualitative with the exception of the repertory grid which combined quantitative and qualitative data analysis. The combination of methods was intended to allow the examination of both beliefs and action so that connections could be drawn and the influence of context could be explored. While the results summarized above provide insight into the beliefs of Ms. Jackson and her students, two methodological issues warrant discussion. The first is a suggested addition to the study, while the second highlights a problem encountered during data collection.

First, in addition to observing the physical education lessons, I would also videotape each class. Video has the advantage of enabling the researcher to re-examine the data if necessary at a later time, whereas a live observation is a snapshot of time which cannot be re-visited as easily. While my two-minute observation rotation worked well and I was able to watch all my participants, I was unable to capture all the events which took place in the class. I wrote down what seemed to be most important at the time and expanded the notes when I returned home, but there were occasions when I needed more information. For example, a video would have been helpful when I was looking for the gender imbalance referred to by the girls in the study. I had made detailed notes of the

verbal interactions which took place when the girls felt they had been left out of the game, but a video would have enabled me to document precisely the number of times they were included. Additionally, a video would for further exploration of qualitative information such as facial expressions and tone of voice which are difficult to capture in words.

Second, while the repertory grid was a valuable methodological addition to the study, two issues arose during administration of the grid which warrant attention. I should emphasize, however, that these problems occurred with Mike and Megan, students who were reluctant participants and whose data were not used in the final analysis. The 10 other students in the study found the grids, "challenging but thought-provoking" (Jim).

The first issue was highlighted by Mike who really struggled to complete the grid. I explained the procedure to him several times and used an example to demonstrate how to fill in the grid. He still had questions and eventually became frustrated and asked me for the answers. I explained that his own answers were the ones I was looking for and that there were no wrong answers, but still he was confused. Mike finally indicated that he understood the procedure and then completed the grid in approximately five minutes. As I examined the language he used in the grid (e.g., "boneheaded," and "bogus") it appeared as though he had not taken the grid seriously.

This incident left me with two questions. Was Mike's reluctance to complete the grid merely a statement that he really did not want to participate in the study or was he truly unable to think in the way I was asking him to? I

concluded that both factors contributed to Mike's reaction to the grid. First, I think he was reluctant to participate and that he saw an opportunity to register his resistance by not completing the repertory grid properly. Second, having examined the interviews I conducted with Mike, his style of thinking was very literal and circular. He could not explain a response without using the same words as the original explanation. For example, "I like football because I like football." With this style of reasoning, it is little wonder that he struggled to create REPGRID constructs which were different from each other and different from the REPGRID elements.

This situation with Mike caused me to question whether the repertory grid is conceptually too difficult for some people to grasp. Completion of the grid requires a certain type and level of thinking, reasoning, and expression; therefore, the REPGRID may be a more appropriate data collection instrument for some people than others. The resultant problem is that as a researcher it is impossible to predict which participants will have difficulty in comprehending the repertory grid. Perhaps a preliminary screening instrument could be devised to identify participants who may have difficulties completing the grid. Alternatively, if difficulties occur during the administration of the grid, a comparable data collection instrument should be available.

The second methodological issue associated with the repertory grid was again related to a reluctant participant. Megan (who became known as "911," as that is the telephone number she gave me to call to remind her to attend interviews) listened very carefully as I explained the procedures and then she

completed her own grid . Before she left the room I examined the data and found that she had simply entered the number one in every box on the grid. I immediately asked if she understood how to complete the grid and she nodded. I then asked if she had any questions or would like to make any changes and she replied, "no." At this point it was clear that Megan had no interest in talking with me further and she left the room. At the end of that interview I was left with a grid which told me little other than the fact that Megan did not want to participate.

This incident illustrated how Megan exploited the grid to make a strong statement about her unwillingness to participate in the study (even though she voluntarily signed the informed consent). From this experience I concluded that the grid can be completed somewhat thoughtlessly. This highlights how vital it is to take the grid back to the participants and ask them to explain the results. Although this was a time consuming process, I believe it adds to the credibility of the data.

Context

In Chapter Four, I spent several pages describing the context for this study since the importance of context cannot and should not be underestimated. Further, at the beginning of each section of results I included a narrative in the words of the participants to act as a lens through which the findings should be viewed. As much of this chapter will be an interpretation of the data through my eyes, it seems appropriate, if not essential, that I begin with a narrative about myself to provide a similar lens.

I believe that every graduate student undertakes a dissertation for both personal and professional reasons. Granted, the dissertation topic should be relevant and contribute to the academic field, but most of all it has to be personally meaningful. As I listened to my fellow doctoral students discussing their dissertations I was somewhat surprised to hear how they connected their choice of topic with various events in their lives or perceptions of themselves. I realized that my choice of topic, teacher and student beliefs about physical education, was also a reflection of myself and my background.

My interest in physical education began during high school. Prior to that time my experiences in physical education were limited. I was educated on the Isle of Man and my recollection of elementary school physical education was being taught by my classroom teacher and having to perform in my underwear (standard uniform at that time for elementary physical education in Britain). I remember some dancing and a limited amount of gymnastics and, most importantly, I remember coming in last in the 'long race' on sports day.

I moved from my rural elementary school to attend junior high in a larger town where physical education seemed much more organized and I was exposed to a variety of sports. Suddenly I had to compete to gain points on a national scale to determine my success in comparison to other students in my age group. I was usually at the low end of the scale and recall desperately wanting to make the average score.

In high school though, things changed. I became interested in field hockey and was given the opportunity to play on the school team by virtue of the

fact that the regular goal keeper was absent. I retained that position throughout high school. Suddenly I was good at something, and that changed my involvement and commitment to other aspects of my school life. I became a team leader both on the field and off.

I decided that I wanted to teach physical education and, ignoring the advice of teachers and career counselors, I went to college to prepare to teach. My undergraduate experience was very formal. As students we were told what to wear and, to an extent, what to think. Although I was provided with a solid background in basic skills and the principles of teaching, I was never taught how to think or asked what I thought.

After graduating from college I taught high school physical education for two years. While I enjoyed teaching I don't think I challenged my students to think for themselves and, again, nobody asked me what I thought.

I arrived at graduate school in this country and found myself being very concerned that I didn't have any beliefs about teaching physical education. I struggled to answer the questions posed by faculty and was in search of, "the answer." The frustrations I felt led me to the literature on beliefs and I became fascinated and relieved by the fact that other people struggled to articulate their beliefs just as I did. Through course work and a variety of teaching experiences I began to realize that I do have deep-rooted beliefs about teaching and learning that define who I am and how I teach.

I believe that knowledge is to be shared and not merely given. In my teaching I am a facilitator who poses questions, assigns papers, and hopefully

stimulates learning through exploration. As a teacher educator my students have reacted with incredulity when I ask them to sit in a circle to discuss a topic. Each student brings experience to my class and I try to incorporate their past as a way of informing their future. They have learned that asking me for, "the answer" elicits the response, "what is your answer?" and that, "I don't know" leads to more discussion and not the elusive, "right" answer.

The remainder of this chapter is devoted to providing *my* interpretations and *my* answers, and that is all. It is not a statement of the absolute truth; rather it is my personal interpretation of the data, literature, and future directions. As you read the discussion, I encourage you to relate it to your own experiences and teaching context. Upon completion, if you have as many questions as you do answers, then the discussion has been successful.

Comparing Participants' Beliefs With Previous Literature

Student Beliefs

The students in this study strongly believe that physical education is not important and they are not alone in this belief. Carlson (1994) indicated that students did not view physical education as a "real" subject, while 50% of the students who participated in a study by Tannehill and her colleagues (1994) rated physical education as being less important than other school subjects.

In addition to physical education being unimportant now, the students in my study believe that it would not contribute to their future. As Cathy said, "everything else in school, you're doing something that's supposed to help you throughout life; I don't think gym is ever going to do anything for me." Cothran

and Ennis (1996a) revealed similar findings as their participants explained that physical education held little value in their lives. They found school as a whole to be disconnected from their lives, while physical education was meaningless and would not benefit them in the future. Students in a study by Parker (1994b) provided similar descriptions and explained that physical education would not contribute to their future career prospects. The meaninglessness of physical education was also documented by Kollen (1981). Her students valued the experience of movement but found physical education to be essentially meaningless and, like the students in my study, they described it as boring.

Students' beliefs about boredom are strongly related to their beliefs about learning. Boredom was created by monotonous repetition which again supported the meaninglessness of physical education and led to the belief that, as a school subject, it is easy and unchallenging. The students in my study claimed that little learning occurred in physical education because they acquired motor skills through participating in sports outside of school. While they viewed participation in out-of-school activities as a means of learning new motor skills, they did not recognize this connection in physical education. This finding contrasts with previous research (e.g., Carlson, 1994; Hutchinson, 1990; Rice, 1988) which suggested that in physical education, students equate participation with learning.

When the students in my study described their participation in physical activities outside of physical education class, their whole demeanor changed. Negativity and apathy were replaced by enthusiasm and animation. They

discussed goal setting and high levels of activity--phrases rarely associated with physical education class. If sport participation can produce such a dramatic change in tone, perhaps the sport education model advocated by Siedentop (1994) would be a means of harnessing some of this energy and transferring it into a physical education setting. Although Siedentop (1994) outlines the importance of including all aspects of sport in his model, for the students in my study a critical component is missing. The overwhelming difference between sport and physical education was that sport is voluntary but physical education is not. Those students who participated on sport teams explained that although practices were mandatory, they had chosen to try out for the team. Students also equated learning with voluntary participation, which may explain why this notion did not transfer to the mandatory physical education setting. While the sport education model may be more attractive to some of these students than the current physical education curriculum at Colonial High School, it would not address the issue of voluntary participation.

Dave and Cathy offered an alternative structure for physical education which would allow students to voluntarily participate at their own convenience. While the drop-in, library-style system they described illustrates their total disregard for content and continuity in physical education, it may be appropriate for certain activities such as weight training or aerobic dance. After covering the basic safety issues and appropriate techniques, these classes tend to be self-paced with the teacher taking the role of demonstrator or supervisor. For other activities (e.g., volleyball, football, soccer etc.), however, voluntary participation

would be impractical because a guaranteed minimum number of students are needed to play the game. In these situations, perhaps the teacher and students could jointly develop a more meaningful physical education experience.

The students in my study claimed not to learn anything in physical education, but they also admitted that they did not expect to learn anything; a finding also confirmed by Carlson (1994). While this finding is depressing, it is not confined solely to physical education. Cothran and Ennis (1996a) stated that school as a whole is irrelevant to students and they do not see links between school and real life. Such disconnectedness was reinforced by one of the teachers in that study who actually told a student that, "school is not the real world" (p. 6). The students in my study were less despondent about education, but you may recall examples such as a conversation between Cathy and Dave who were reluctant to learn in math class, and Beth who frequently skipped her last couple of classes regardless of which subjects she missed. These incidents reflect an apathetic attitude toward school as a whole, and physical education is just another small, irrelevant piece. In my study, however, physical education was the main target of the students' discontent primarily because it is not required in college or for later success in life.

There are several possible explanations for the lack of importance students place on physical education. Stinson (1993) suggested that students have been socialized into the belief that school is simply a means to an end. As most students do not intend to teach physical education, it is irrelevant as a school subject. Results from my investigation support this idea as the students

believed that, "you only need gym class if you want to be a gym teacher" (Becky). Although this argument can also be made for other school subjects, their importance is rarely questioned because they contribute to the students' grade point average (GPA) and most are required for admission to college. In many schools physical education is not counted as part of the GPA and will not assist students to gain entry to further education or career placement.

Second, team sports have been the primary focus of studies which used observations in addition to interviews to examine physical education from the students' perspectives. I observed volleyball and team handball, Carlson (1994) watched three team sports and gymnastics, and Parker (1994b) observed volleyball. In addition to team sports, however, Cothran and Ennis (1996a) examined fitness and dance units and found that in contrast to the team sports, the students were able to make some connections between these more individualized units and the rest of their lives.

Future studies could be conducted to compare students' beliefs about the appropriateness and relevance of individual activities as opposed to team sports. There is some indication that in certain contexts individual sports may be deemed more meaningful by students (Cothran & Ennis, 1996a). If this is the case, we may be able to explore the factors that contribute to meaningfulness and adapt them to accommodate other teaching situations.

The key to a third explanation may be held in the research of Ennis and her colleagues (Ennis, 1994; Ennis et al., 1992) who developed an instrument to investigate teachers' value orientations. These researchers found that students'

responses to questions about learning in physical education were related to the value orientation of their teacher. Students who were taught by teachers with an ecological integration/social reconstruction (EI/SR) value orientation focusing on the social aspects of teaching, had difficulty expressing their ideas about learning in physical education. If the teachers who participated in the studies by Carlson (1994), Cothran and Ennis (1996a, 1996b), and Parker (1994b) also held the EI/SR value orientation, perhaps this explains why students were unable to attribute any learning to physical education.

Although Ms. Jackson did not complete the Value Orientation Inventory (Ennis, 1985), her beliefs suggest an EI/SR value orientation. Further support for this idea was found when Ms. Jackson's definition of learning was compared with that of her students. She focused on the affective aspects of learning such as developing self-esteem and a positive body image, while her students focused solely on the acquisition of motor skills. If the students are looking for learning only in psychomotor terms, while Ms. Jackson focuses on learning in other domains, it is little wonder that the students do not attribute any learning to physical education.

The difference between Ms. Jackson's definition of learning and that of her students highlights a total miscommunication of goals. Ms. Jackson never addressed learning in class other than to remind students about their responsibility to be civil and treat each other with respect. She provided them with the means without ever stating the ends. She made no explicit mention of her beliefs about learning, or of how she defined learning, and her actions sent

mixed messages to the students. For example, in the immediate physical education context Ms. Jackson acted upon her beliefs about equity by eliminating skills testing and disciplining students who engaged in name calling or targeting behaviors. Outside of class she discussed possible protest strategies with girls who were upset about the number of pep rallies organized for the football team which outnumbered formally scheduled events to support any of the girls' teams. In contrast, when students asked why they had to practice volleyball skills Ms. Jackson explained that even highly skilled Olympic athletes had to practice. By using a skill-based rationale to justify the content of physical education, Ms. Jackson contributed to the students' definition of learning--a definition which contradicted her own beliefs.

In this study, the old adage, "actions speak louder than words" seemingly does not hold true. Ms. Jackson acted on her beliefs, but primarily verbalized a skill based focus. Although she made statements at the beginning of each unit explaining the need for civility and respect, any other connections to equity had to be inferred from her actions. I was deliberately looking for these links, whereas my participants, a group of disinterested students who were bored with physical education, merely took her words at face value. Consequently, Ms. Jackson and her students had different definitions of learning and the physical education classes I observed at Colonial High School addressed neither.

Taking these miscommunications into consideration, perhaps future research on teacher and student beliefs about physical education should include a data collection instrument such as the Value Orientation Inventory (Ennis,

1994; Ennis et al., 1992) to explore connections between teachers' value orientations and their students' beliefs about learning. Such data would assist in determining whether teachers with a particular value orientation more effectively convey learning outcomes which reflect their own beliefs about physical education.

Closely related to students' beliefs about the meaninglessness of physical education and the minimal amount of learning that occurs in class are their beliefs about the role of the teacher. If there is nothing to learn (and hence nothing to teach) in physical education, what role does the teacher play? According to the students in my study, Ms. Jackson was little more than a referee who sometimes, "just gets in the way" (Sylvia). Comments such as this are in direct contrast with some previous research which has shown that the teacher can be a very important influence on students in physical education (Carlson, 1994; Luke & Cope, 1994; Pissanos & Allison, 1993; Rice, 1988). The participants in Carlson's study (1994) indicated that the teacher was the most influential factor in physical education, while other students referred to the importance of the teacher as a good example and positive role model (Luke & Cope, 1994; Rice, 1988). Although teachers were important, the actual roles they played included supervisor, organizer, director, and manager rather than pedagogue (Hutchinson, 1990; Schempp, 1993). These roles emphasize a more custodial view of teaching in which the importance of learning is diminished.

Ms. Jackson was not important to students and, while they were not openly negative towards her in class, comments made during interviews revealed deep-rooted feelings. When asked what he would tell a new student about physical education Jim immediately said, "watch out for Jackson," and explained that she should, "not be crossed." Nicole and Becky reacted in the same way but were unwilling to discuss their responses further. Most of the students did not express such strong opinions, but I suspect that their negativity toward Ms. Jackson was the result of her strong views and willingness to act upon them. The recent court case is a prime example which caused embittered exchanges between teachers and students and split the community in Braddan. Ms. Jackson was at the center of this case and I believe that her involvement and adamant stance on the issue of appropriate clothing in physical education class served to alienate her from students.

The students' beliefs discussed to this point paint a gloomy picture of high school physical education--it is meaningless, uneducational, monotonous, and the teacher plays a minimal role in class. The second belief system expressed by the students was a little more positive and focused on the importance of having friends in physical education class. For these students, fun was equated with being with friends and there was a strong link between having friends in physical education and enjoying the class. Such emphasis on peer relationships adds support to similar findings reported in previous research (e.g., Parker, 1994b; Ratliffe et al., 1994; Stinson, 1993, Tannehill et al., 1994; Tannehill & Zakrajsek, 1993). These results also confirm the findings of a study by Allen

(1986) who found that one of high school students' main agendas for attending school is to socialize.

Other researchers, however, reported findings which question the importance of peer relationships. Cothran and Ennis (1996a) concluded that the students in their study were isolated and that there was little interaction. In my investigation friends were a vital part of physical education and individual isolation became an issue only if a student had no friends in a particular class. Interestingly though, while individuals were not isolated in physical education, social cliques were. The students professed to be inclusionary but refused to accept other peers into their established social group.

The difference in context between the two studies may explain the conflicting results. Colonial High School is a small rural/suburban school housing 775 students. In contrast, Marshall High (Cothran & Ennis, 1996) is a large, urban facility (2100 students) in which there is a strong emphasis on security since a teacher was shot last year. At Colonial High School the students defined security and comfort as being with their friends, and loyalty to friends was paramount. At Marshall, however, students may have self-selected to be isolated from others as a means of protecting their personal safety.

School context may have a strong impact on the importance of peer relationships in physical education, but the body of literature currently available is too small to draw meaningful conclusions. Additional information about school contexts, therefore, would provide a greater understanding of student interaction in physical education class.

While many of the beliefs contained within the students' second system agree with those expressed by students in other research, one aspect warrants particular attention. The girls who participated in my study were very vocal in their belief that the boys did not include them in games. On the surface, this finding corresponds with the results of studies conducted by Griffin (1984, 1985). She observed team sport units and established a categorization system for describing a range of student participation patterns and behavior in physical education. While some of these participation styles were observed in my students, Griffin (1984) found that the overall behavior exhibited by girls was essentially non-assertive and she outlined four behavior categories: giving up, giving away, hanging back, and acquiescing. The girls who participated in my study, however, rarely exhibited those forms of behavior and were quick to inform the boys if they felt left out of the game.

Perhaps such assertiveness can at least be partially attributed to the influence of Ms. Jackson whose concern for equity in physical education may have encouraged the girls to speak out when they felt excluded. While none of the girls made this connection, their behavior may exemplify how students, unconsciously and perhaps even unwillingly, responded to the beliefs Ms. Jackson espouses.

In contrast to the usually assertive behavior exhibited by the girls, occasionally they were reserved in their actions and hesitant to participate. For example, Nicole exhibited 'giving away' (Griffin, 1985) behavior when she refused to shoot at goal in team handball. On a less overt level, some girls

indicated that there were times when they simply did not want to participate or be included in the game. They chose to self-exclude from the action, but expected the boys to know when they wanted to re-enter the game. While such actions were observed, they were much less frequent than the assertive behaviors described above. The girls who participated in my study, therefore, broke the stereotype that females are generally unassertive in physical education. Further research on this topic may reveal factors which promote female assertiveness and establish clear mechanisms by which the teacher can influence such behavior.

The beliefs held by the high school students who participated in my study seemed firmly established. As 10 of them were graduating at the end of the year, their beliefs about physical education are the ones they took with them when they left. While understanding their current beliefs may provide valuable insight into the future of physical education, if we are to initiate changes in beliefs, we must begin at the source.

A recent study by Sanders and Graham (1995) explored the initial physical education experiences of kindergarten children. Even at such a young age, these children had very strong views about certain aspects of physical education. For example, they disliked stretching and one student employed a variety of tactics to avoid participation. The authors concluded that, "the children's participation in stretching can best be described as a developed tolerance of the activity" (p. 381). If the seeds of discontent and dislike are planted as early as kindergarten, they will only flourish with time. In the 12 years

between kindergarten and graduation, my students had 'developed tolerance' not just of stretching, but of physical education as a whole. Future research, therefore, should be conducted with younger students to explore where, when, and how their beliefs about physical education originate and develop over time. Only then can influential contextual factors be identified and addressed in an attempt to create positive changes in those beliefs.

Ms. Jackson's Beliefs

In 1991, Griffin challenged teachers to embrace equity in their gymnasiums and to teach justice, freedom, and equality to their students. Ms. Jackson rose to that challenge and equity formed the core of her powerful multi-dimensional belief system. For her, the focus of physical education was to create a safe atmosphere for all students, both emotionally and physically. She did not tolerate targeting or name calling in class and consistently reprimanded students who made inappropriate comments to their peers.

Ms. Jackson believed that physical education should focus on the promotion of self-esteem and a positive body image. Her beliefs about learning supported the findings of previous research in which teachers identified self-esteem, self-image, social skills, lifetime skills, character, and developing responsible citizens as important components of learning (Boggess, 1985; Bussis, Chittenden, & Amarel 1976; Kagan, 1993; Nespor, 1985b; Roberts, 1990; Stroot et al., 1994). The social aspects of teaching and learning were also emphasized by teachers who exhibited an ecological integration/social reconstruction value orientation (Ennis, 1994; Ennis et al., 1992).

Many teachers focus on the psychological and social aspects of learning in their physical education classes. While the development of self-esteem or promotion of a positive body image may be laudable goals, unless they are directly communicated in class and students are held accountable, we are not actually teaching to our goals. Learning is the foundation of education, and students attend school to learn (albeit somewhat involuntarily). According to Ms. Jackson and other physical education teachers, our learning focus has moved away from motor skill acquisition to the psychological and social aspects of physical education. But, if the structure of physical education at Colonial High School is typical, we may in fact be guilty of not actually teaching anything.

At Colonial High School students were not held accountable for acquiring skills of any type. There was no measure of student learning, and grading was based solely on participation and effort. Other researchers have reported similar findings (Ennis et al., 1992; Matanin & Tannehill, 1994) and the discrepancy between goals and outcomes seems widespread. This conflict raises the question, "if the teacher equates learning with psychological and social development, how can such learning be measured?" For example, if developing self-esteem is a goal for learning, how can we define success? Further, if student learning is a basis for grading, surely an increase in self-esteem cannot determine whether students pass or fail a physical education class. In my opinion we cannot hold students accountable for increasing their self-esteem in order to pass a class, but we can hold them accountable for being knowledgeable in processes designed to help them increase self-esteem. We

can very deliberately include activities and assignments which address the psychological and social aspects of learning. For example, Hellison's model of social responsibility (Hellison, 1984) offers a concrete representation of an abstract construct. Similarly, including activities designed to promote teamwork and trust would enhance social skills. The key to the success of such strategies, however, lies in the teacher's ability to explicitly present and constantly reinforce the relationship between activity and learning. In physical education, learning through osmosis does not work--our students need concrete connections and providing them is our responsibility.

While Ms. Jackson was trying to promote self-esteem and equity, the students were simply content to be with their friends and pass the class. This conflict of interest is just one example of the differences between teacher and student beliefs, and such disparity has been documented in previous research. Wang (1977) found that while the teacher focused on promoting self-worth, cooperation and equity, the students imposed their own agenda which focused on segregation, discrimination, and power imbalances. More recently, Cothran and Ennis (1996b) also noted the difference in teacher and student perceptions of the meaningfulness of physical education, the value of curriculum changes, and the definition of class participation. Similar conflicts were documented by Farrell, Peguero, Lindsey, and White (1988).

The results of these studies indicate that teachers and students hold different belief systems which co-exist within the context of a physical education class and they tolerate each other with a sense of resigned acceptance. For

example, Ms. Jackson tried to create a safe atmosphere for her students by attempting to eliminate inequitable behaviors as a means to promote self-esteem, yet she admitted that all her students really learn is, "how to survive in physical education." She was extremely cognizant of the fact that students knew exactly how many classes they needed to attend in order to pass, and that some individuals (e.g., Becky and Beth) would deliberately only complete the minimal requirement.

Ms. Jackson did little to try to change the students' behavior and seemed to accept their negativity toward physical education. During the final phase of data collection I remember being very apprehensive about taking the students' beliefs back to Ms. Jackson because I was concerned about her reaction. I was devastated by the consistent denigration of physical education and the manner in which the students constantly deemed it to be completely irrelevant. Ms. Jackson, on the other hand, was not surprised by the students' responses and even thought they were more positive than she expected. Her reaction prompted the question, "if the beliefs held by these students were better than expected, what can we do to raise our expectations?" If we expect so little of our students, we ourselves are contributing to the problems physical education is encountering today.

The Influence of Context

An explanation for Ms. Jackson's reaction to her students' beliefs may lie in the fact that for the last 21 years she has worked in a school that does little to promote the status of physical education. Both Pinkham (1994) and Smyth

(1995) indicated that powerful forces in the workplace influence teachers' actions and beliefs and require them to adjust their expectations. In her study of first year teachers Smyth stated, "the adjustment was most often downward toward expecting less, accepting less, and doing less" (p. 213). If this is true of first year teachers, the constant negative contextual pressure experienced over 21 years of teaching may simply have worn Ms. Jackson down.

While this point highlights the possible damaging effects of long term exposure to the negative influences of an unsupportive teaching environment, it should be remembered that students are also exposed to the same broad context. The students at Colonial High School seemed to embrace the marginal vision of physical education promoted by parents, administrators, and even teachers. The strong influence of these multiple contextual factors raises questions about the impact Ms. Jackson can have on her students' beliefs. Even if she clearly articulated her own beliefs about physical education, she is only one source from which the students receive information, and her positive beliefs would be a drop in the contextual ocean of negativity.

Although the broad context of the school and community was essentially unsupportive, Ms. Jackson was able to act upon her beliefs by manipulating the immediate context of physical education class. For example, she had eliminated skills testing and student selection of teams in an attempt to promote equity and create a safe atmosphere in class. While the immediate physical education context allowed Ms. Jackson to enact her beliefs, however, the broad context became her scapegoat. When reading the beliefs of her students, she was

quick to blame an unsupportive context as a defense for a program they consider to be repetitive, boring, and unchallenging.

Context, therefore, influences teacher and student beliefs in many different ways. On a broad level, it may be responsible for the creation and reinforcement of students' negativity toward physical education and teachers' resigned acceptance of their marginal status and that of their subject (Sparkes, Templin, & Schempp, 1990). More specifically, the immediate context of physical education class can be manipulated by teachers and students alike in order to support their own beliefs. If context is as influential as this study and others suggest, future researchers must identify and target the most important contextual factors in order to develop a program to positively change beliefs about physical education. Parents, community members, teachers, peers, and the media, all contribute to the context of physical education. Discovering their relative influence and the mechanisms through which influence operates may provide the starting point of a step-by-step plan for change.

Conclusions

In the depressing findings of this study, there is a small glimmer of hope. On the surface, these students seem to be alienated from physical education, but I question that assumption. Both Carlson (1995) and Cothran and Ennis (1996a) cited social isolation, meaninglessness, and powerlessness as components of student alienation from physical education. The students in my study certainly found physical education to be meaningless and they were very vocal in expressing their beliefs. They were not isolated in physical education,

however, unless they were in a class without their friends, a situation which rarely occurred. They had strong friendship groups in which loyalty played an important role. For example, students were willing to sacrifice the activity in which they wanted to participate in order to ensure that no member of the group was isolated in another unit.

With regard to powerlessness, although physical education is mandatory at Colonial High School, within that framework the students manipulated the situation. Ms. Jackson had authority, but the students still claimed a certain amount of power and were able to influence what happened in class. For example, the unit following my final observations was indoor soccer, but the students protested that they wanted to play volleyball. Eventually a compromise was reached and the class alternated daily between volleyball and soccer.

Cothran and Ennis (1996a) drew from the work of Seeman (1959, 1975) and included cultural estrangement as another aspect of alienation. Cultural estrangement refers to an individual's rejection of commonly held societal values or, on a more intimate level, the rejection of the values held by their immediate social group (Cothran & Ennis, 1996a). The results of my study indicate that the students did not reject the value society places on physical education but in fact embraced it. The actions of administrators, parents, peers, and even teachers supported the students' belief that physical education is meaningless and unimportant. For their part, the students simply adopted the beliefs of those around them. Although the belief that physical education is not important is

extremely damaging to the subject, the students actually exemplified their surrounding cultural values rather than rejecting them.

This relationship between the students' beliefs and those espoused and enacted by people in the immediate context provides an interesting twist to the notion of alienation. Perhaps the current low status of physical education contributes to a misrepresentation of alienation and its component parts. The definition of alienation seems to operate on the assumption that societal values are positive, and hence rejection of such values contributes to alienation. In this case, however, societal values are negative and rejection of these values would indicate a positive disposition toward physical education, which is certainly not a component of alienation. Consequently, further research into the construct of alienation and its definition as it applies to physical education must be conducted in order to draw meaningful conclusions.

According to the current definition of alienation provided in the literature (Carlson, 1995; Cothran & Ennis, 1996a), the students in my study were not totally alienated from physical education, but changes must be made to prevent completion of the alienation process. In 1983 Siedentop warned us that high school physical education was becoming an 'endangered species', and almost a decade later he urged teachers, teacher educators, and administrators to, "think differently" (Siedentop, 1992). In 1992 secondary school physical education had reached a, "critical crossroads" (Siedentop, 1992) and the results of my study seem to indicate that we are still deciding which road to take. Our high school students dismiss physical education as being irrelevant and many of our

teachers are tired of fighting a system which continuously questions their very existence.

As teachers, teacher educators, and researchers we must each take responsibility for initiating change. Teachers must use concrete terms to convey the importance of physical education and create links to the future lives of students. We must also convince influential people (e.g., parents, administrators, and politicians) that our physical education curricula are meaningful, quality programs which benefit students.

The reality instead appears to be the opposite, as documented by Placek and Locke (1996) who were unable to find entire high school physical education programs which fit their definition of quality. This is sad commentary on the state of our field, and speaks loudly to the direction changes should take. Meaningless, irrelevant physical education programs are not acceptable and as a profession we must determine what constitutes quality and move every physical education program toward those standards. Quality need not mean a rigid, inflexible, national curriculum but rather a set of contextually specific goals from which teachers could develop meaningful programs with their students. For example, at Marshall High School (Cothran & Ennis, 1996a) the most relevant curriculum may focus on individual sports which do not threaten the isolation strategies employed by students to survive in what appears to be a hostile environment.

Teacher educators must better prepare undergraduates to teach in the context of public schools. We have the responsibility of presenting the fact that

not all students in the public schools enjoy physical education. As I teach my undergraduate class, "Introduction to Teaching Physical Education," I am amazed at how many of my students assume that all high school students really enjoy physical education, as they did. Such assumptions should be challenged and strategies for dealing with disillusioned, disconnected, and disenchanting students must be discussed, observed, and practiced.

Researchers must continue to conduct studies which include teachers and students. The current literature base is limited and more data are needed for informed choices about program changes to be made. In addition to the ideas outlined in this chapter, future studies should include investigations of specific physical education curriculum models to determine relevancy from the students' perspective, evaluations of small-scale change projects which may inform the profession as a whole, and in-depth investigations focusing on the influence of context.

Most importantly, however, as educators we need to listen. In the past we have rarely listened to our students or even given them the opportunity to talk. If secondary school physical education is to be saved, we must begin to listen now. We have to take 'the road less traveled' and ask our students for help in creating meaningful and relevant physical education programs.

APPENDIX A
INFORMED CONSENTS

Informed Consent for the Teacher

My name is Jenny Parker. I am a doctoral student at the University of Massachusetts in the Physical Education Teacher Education Program. For my dissertation, I am interested in studying what a high school physical education teacher and the students in one of her/his classes believe about physical education. I think that teachers and students come to a class with their own set of beliefs about the subject to be taught. To fully understand the interactions in the class, we need to become aware of these beliefs.

This investigation will take the form of a case study of a class in which at least 15 students agree to take part. If you decide to participate, I would like permission to approach one of your 10th-12th grade classes (or more if necessary) until I recruit 15 students from the same class who are willing to participate.

First, I would like to observe two units of instruction with this class. My role in these lessons will be that of a non-participant observer taking field notes. The field notes will be used to create a profile which describes your activity patterns and those of your students in the class sessions I observed. In addition to the observations, I will also conduct four interviews with each of the students who agree to participate, and I will ask you to participate in a total of five interviews to be scheduled at your convenience. Four of the interviews will be conducted during fall 1994 and the fifth in the winter 1995. With the exception of Interview 3, each interview will last for approximately 45 minutes and will be recorded on audio tape which I will transcribe. Interview 3 will last for one and one half hours, which can be divided into two phases if necessary. The focus of the interviews will be as follows:

Interview 1 - Contextual information: I will ask you about the school and community

Interview 2 - Background information: I will ask you about your experiences as a teacher and about physical education in your school.

Interview 3 - Repertory grid: I will ask you to complete two pencil and paper grids designed to explore how you think about physical education.

Interview 4 - Response to action profile and beliefs: I will ask you to respond to a profile which describes your actions in the classes I observed and also your beliefs about physical education which I extracted from the second and third interviews. The beliefs we discuss will then be translated into a description of a physical education teacher who is applying for a hypothetical job at your school. The students who agree to participate in this study will be asked to respond to this description. At no time will they be made aware that the beliefs included in the description are actually your beliefs.

Interview 5 - Respond to students' beliefs: I will ask you to respond to your students' beliefs about physical education

The results of the study and the process of collecting information will be discussed in my dissertation defense and may result in further presentations or publications. In order to minimize the risk of participant identification, pseudonyms will be used for all participants, the school and the school district.

Your participation is entirely voluntary and you are free to discontinue or refuse participation at any time without penalty or prejudice. In addition, you have the right to review any of the material to be used in the study, and a summary of the findings will be made available at your request.

You have been furnished with two copies of this informed consent, both of which should be signed if you are willing to participate. One copy should be retained for your records, and the other should be returned to me. Your signature below indicates that you have read and understand the information provided above, that you willingly agree to participate, but that may withdraw your consent at any time. If you have any questions about the research, please call me, Jenny Parker: 253-2535, or my dissertation advisor, Dr. Judith Placek: 545-0541.

Participant's Signature: _____ Date: _____

Investigator's Signature: _____ Date: _____

Informed Consent for Female Students

Dear Parent/Guardian:

My name is Jenny Parker, I am a doctoral student at the University of Massachusetts in the Physical Education Teacher Education Program. I am conducting a study to examine teachers' and students' beliefs about physical education, and your daughter has been invited to take part.

If your daughter would like to participate, I will observe her in two units of physical education. Additionally, she will be asked to take part in four interviews scheduled during study hall or at another time when she will not miss any classes. I will conduct the interviews which will last approximately 45 minutes, and will be recorded on audio tape. The focus of the interviews will be as follows:

Interview 1 - Group meeting: This meeting will include all the students who agree to participate. I will ask for their school schedule and home addresses so I can arrange the interviews and mail pre-interview reminders. Additionally, I will ask questions about physical education.

Interview 2 - Background information: I will ask about her previous experience in physical education.

Interview 3 - Repertory grid: I will ask her to complete a pencil and paper grid designed to explore how she thinks about physical education.

Interview 4 - Response to action profile and job description: I will ask your daughter to respond to a profile which describes her actions in the classes I observed. I will also ask her to react to the beliefs of a physical education teacher who is applying for a hypothetical job at her school.

Participation is voluntary and if your daughter feels uncomfortable, she is free to withdraw from this process at any time. Your daughter's name will not be used in the study or any presentations/publications which may result.

If you or your daughter have any questions about this project please do not hesitate to call me, Jenny Parker: 253-2535 or my advisor, Dr. Judith Placek: 545-2323. Your signature and the signature of your daughter below indicate that you have both read the information above and agree to participate in this project, but that you may withdraw your permission at any time.

Parent/Guardian's Signature: _____

Parent/Guardian's Name: _____
(PRINT)

Date: _____

Student's Signature: _____

Student's
Name: _____
(PRINT)

Date: _____

Investigator's Signature: _____

Investigator's
Name: _____
(PRINT)

Date: _____

Informed Consent for Male Students

Dear Parent/Guardian:

My name is Jenny Parker, I am a doctoral student at the University of Massachusetts in the Physical Education Teacher Education Program. I am conducting a study to examine teachers' and students' beliefs about physical education, and your son has been invited to take part.

If your son would like to participate, I will observe him in two units of physical education. Additionally, he will be asked to take part in four interviews scheduled during study hall or another time when he will not miss any classes. I will conduct the interviews which will last approximately 45 minutes, and will be recorded on audio tape. The focus of the interviews will be as follows:

Interview 1 - Group meeting: This meeting will include all the students who agree to participate. I will ask for their school schedule and home addresses so I can arrange the interviews and mail pre-interview reminders. Additionally, I will ask questions about physical education.

Interview 2 - Background information: I will ask about him previous experience in physical education.

Interview 3 - Repertory grid: I will ask him to complete a pencil and paper grid designed to explore how he thinks about physical education.

Interview 4 - Response to action profile and job description: I will ask your son to respond to a profile which describes his actions in the classes I observed. I will also ask him to react to the beliefs of physical education teacher who is applying for a hypothetical job at his school.

Participation is voluntary and if your son feels uncomfortable, he is free to withdraw from this process at any time. Your son's name will not be used in the study or any presentations/publications which may result.

If you or your son have any questions about this project please do not hesitate to call me, Jenny Parker: 253-2535 or my advisor, Dr. Judith Placek: 545-2323. Your signature and the signature of your son below indicate that you have both read the information above and agree to participate in this project, but that you may withdraw your permission at any time.

Parent/Guardian's Signature: _____

Parent/Guardian's Name: _____
(PRINT)

Date: _____

Student's Signature: _____

Student's
Name: _____
(PRINT)

Date: _____

Investigator's Signature: _____

Investigator's
Name: _____
(PRINT)

Date: _____

APPENDIX B
OBSERVATION TOOL

OBSERVATION SHEET

Unit: _____

Lesson #: _____

Date: _____

Page #: _____

Name/Time		Teacher (General)
Name/Time		Teacher (General)
Name/Time		Teacher (General)

APPENDIX C

PROTOCOL FOR TEACHER INTERVIEW 1

Contextual Information

- ◆ Description of the school including number of students, how they are grouped, ethnic and gender ratios
- ◆ Tour of the school facilities
- ◆ Description of the community in which the school is situated
- ◆ School-community relations
- ◆ Budget
- ◆ How teachers are assessed or evaluated
- ◆ Physical education curriculum

APPENDIX D

PROTOCOL FOR INTERVIEW 2 (TEACHER AND STUDENTS)

Interview Guide for Teacher

Interview 2

Why did you choose to become a physical education teacher?

Please describe an event that occurred in one of your physical education classes that you remember well.

Why did you choose this particular event?

How was it significant?

What did you learn from the event?

How do you believe physical education is valued in this school?

By classroom teachers?

By the students?

By the principal?

By parents?

Probe after each question: What leads you to believe this?

Assume you are a cooperating teacher and I am a new student teacher who has just arrived at the school? What do you think I would need to know first?

What do I need to know about physical education in this school?

What do I need to know about the students?

What do you want your students to learn in physical education?

How do you think students learn best?

What activities are included in your physical education program?

How did you choose those activities?

Interview Guide for Students

Interview 2

If I was a new student, what would you tell me about physical education class?

What kinds of things do you like to do in physical education?

What kinds of things do you dislike in physical education?

What sort of physical activities do you like to do after school?

With friends?

With family?

Describe any experience in physical education that stands out for you.

What do you learn in physical education classes?

What do you want to learn in physical education classes?

How would you rate your experiences in physical education at this school?

How did you choose that rating?

How do you believe physical education is valued in this school?

By the P.E. teachers?

By the Principal?

By you?

By the other students?

By your parents?

APPENDIX E

PROTOCOL FOR REPERTORY GRID

Repertory Grid Protocol

Today we are going to work on a project that uses a tool called the repertory grid. It will help me understand what you believe about physical education.

This is what a blank grid looks like (see following page). To explain how it works let's do an example. Think about your favorite music groups. Just call out the names of six groups and we will write them across the top of the grid.

If we look at the top row of the grid, we can see that three of the boxes have circles in them. Select the three groups that are identified by the circles in the boxes. Looking at these sports, how are two of them alike in some way? Under the column headed LIKENESS, write down in the first row, the word or words that describe how the two groups are alike.

What makes the third group different? Under the column labeled DIFFERENCE, write down in the first row, the word or words that describe what makes the third group different.

Now we need to consider each of the six groups and where they would fit on a number line, if 1 is the LIKENESS description, and 5 is the DIFFERENCE.

When all the boxes on the first row have been completed, we select the three groups marked by the circles on the second row and follow the same procedure. The LIKENESSES and DIFFERENCES should be different for each row of the grid.

ELEMENTS

						LIKENESS		1	5	DIFFERENCE	

The Actual Grid

Now that we have done an example, I would like you to complete a grid to help me understand your beliefs about physical education. This grid has six items written across the top which are characteristics of a good physical education lesson. The items are the ones we talked about the first time we met as a group this semester (see following page).

Now, select the three items that correspond to the boxes with circles in them on the first row of the grid. Study the three items and ask yourself the question: "How are two of these items alike?" In the LIKENESS column write down the word(s) that describe how the two items are alike.

What makes the third item different? In the DIFFERENCE column write down the word(s) that describe how the third item is different. The LIKENESS column has the number 1 and the DIFFERENCE column has the number 5. Now, consider each of the six items and think about where it would fit on that number line. Write down the appropriate number in the box under the item on the first row.

You have now completed the first row; please continue to fill in the grid by repeating the same procedure for each row. Remember, the LIKENESSES and DIFFERENCES should be different for each row of the grid.

If you have any questions, please do not hesitate to ask.

RIGHT POLE OF CONSTRUCTS

		RIGHT POLE OF CONSTRUCTS							
		DIFFERENCE							
		5							
ELEMENTS	CHANGING CLOTHES		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	
	PHYSICAL ACTIVITY	<input type="radio"/>			<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	
	BREAK FROM CLASSES			<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
	COMPETITION	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>		<input type="radio"/>
	TEAMWORK		<input type="radio"/>		<input type="radio"/>	<input type="radio"/>			<input type="radio"/>
	STUDENT INTERACTION	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	
		1							
		LIKENESS							

LEFT POLE OF CONSTRUCTS

APPENDIX F

PROTOCOL FOR ACTION PROFILES
(INTERVIEW 4)

Action Profile Probes

What are your first thoughts having read this profile?

Are any parts of the profile inaccurate?

Is there anything you feel is missing?

The remainder of the interview will focus on the specific contents of the profile. I will ask questions to ascertain why the participant acts in a particular manner.

APPENDIX G

STUDENTS RESPOND TO BELIEF STATEMENT OF CANDIDATE

Questions About the Candidate for the Job

You have been asked to be the student representative on a search committee for a new physical education teacher at this school. Each of the candidates has been asked to write a statement of their beliefs about physical education. This is one candidate's belief statement.

Please read this statement.

What are your first thoughts having read this statement?

What do you like about this candidate?

What do you dislike about this candidate?

What would you change?

Would you hire this physical education teacher?

Why?

Why not?

APPENDIX H

PILOT STUDY

Prior to beginning this dissertation I completed a smaller version of the study. The observation period was reduced to four lessons, but one teacher and three students completed the whole data collection process. The pilot study tested the methodology and the various interview protocols and also specifically addressed the following questions:

1. Are individual interviews or interviews in pairs most successful at eliciting background information from students?
2. Are the interview questions appropriate?
3. Is 'beliefs about physical education' too broad?
4. Can the participants distinguish among the elements in the repertory grid?
5. What will a completed action profile look like?
6. How do the participants react to their action profiles?
7. How should the teacher's beliefs be presented to the him/her--as statements or a descriptive narrative?
8. How do the students respond to the description of a physical education teacher applying for a hypothetical job?

After each stage of the pilot study, the participants were asked to comment on the procedure and make any suggestions which would help their understanding of the tasks.

What Worked and What Didn't

Although the pilot study was small, it served to highlight which aspects of the methodology were successful, and which areas needed to be refined prior to the start of the actual study.

1. Scheduling interviews with students was problematic due to their study hall being replaced with a chemistry lab and other school related activities. Also, students occasionally forgot about their interview. While I have no control over the re-scheduling of school activities, I need to be able to remind students of their interview appointment. This issue now will be addressed in the first interview with the students.
2. Interviewing students in pairs was more successful than interviewing individually, although I think this may depend upon the pairing of the students. The structure of the first interview now will allow the students to name three peers with whom they would like to be interviewed.
3. Most of the questions I asked the students and the teacher in the first interview were appropriate, although I think two changes should be made.
 - a) The first question I asked the teacher was too vague and should be replaced by a more specific question such as: why did you choose to be a physical education teacher?
 - b) The students had difficulty answering the questions: How do you believe physical education is valued by: the principal? the classroom teachers? The students indicated that they had no experience upon which to draw answers.
4. All participants completed the repertory grid, but the elements I chose were not appropriate as they contained too many possible variations. My intention had been to provide the elements to help facilitate a comparison among grids

in the analysis stage of the study. An alternative approach is to elicit the elements from the students as a group.

5. Each participant responded to their own personal profile with surprise at how closely they had been observed! They all discussed their profiles, however, and explained some of the reasons for their actions.
6. To gain an in-depth understanding of how context facilitates or inhibits the translation of beliefs into action, I need to ask more direct questions about the context of the school and community. These questions will now form the focus of the first interview.

To conclude, the pilot study was extremely useful in identifying areas which need to be rethought. Overall, however, I like the interactive nature of the study, and feel that once the changes have been made, it will enable me to answer my original questions.

APPENDIX J
ACTION PROFILES

The reader is reminded that the profiles contained in this appendix were written for individual participants and were not intended to be read as an entire group. The profiles are also written in the language used by the participants and consequently some of the phrases are informal, conversational, and somewhat repetitive.

Ms. Jackson

Sue Jackson has been teaching physical education at Colonial High School for 21 years. She has short gray hair and glasses and during the units I observed in the fall and winter, she usually taught in shorts.

Prior to the start of class Ms. Jackson sat in her office which is located in the girls locker room. The door to the office was always open and students came in to chat, ask questions, give her notes from the nurse, negotiate make-ups, or request locker combinations. After addressing all the students' needs, Ms. Jackson collected any equipment for the lesson, a set of cards on which to record grades, and then walked through the locker room to the gym. When Ms. Jackson arrived in the gym, most of the students were already sitting in the bleachers chatting.

At the beginning of each unit, Ms. Jackson spoke to the students about the groundrules for participating in physical education. She stressed that while she did not expect the students to be "best friends" they should treat each other with civility and respect. Ms. Jackson then indicated that low impact hiking boots were inappropriate footwear in the gym and that students were not allowed to wear hats because they were a safety hazard. Ms. Jackson reminded students of the need to turn their shirts inside out if they displayed slogans which could be offensive. She requested that students do this without having to be asked.

Every lesson began with the students doing laps of the gym for one minute while Ms. Jackson set up the equipment. This usually involved putting up volleyball nets or closing the gym divider. Ms. Jackson reminded the students to run in the same direction (always counter clockwise) and not to jump for the basketball hoops on their way around. After the minute was over, the students formed a circle and Ms. Jackson led them through a routine of stretches. This warm-up was the same for both units I observed, although on one occasion Ms. Jackson asked three students to lead the stretches. After the warm-up, the students usually remained in a circle while Ms. Jackson explained their next task.

In the first few volleyball lessons the students worked in pairs or small groups and practiced a variety of drills designed to work on their set, bump, and serve. Ms. Jackson explained the drills and sometimes used students to demonstrate. She often asked questions about a particular skill, "When should you use the forearm pass?" "Where should you contact the ball?" "Where should the ball go?" Ms. Jackson also gave teaching cues with each of the skills she described. In the bump she explained, "the legs are most important - bend your knees, there really isn't much motion in your arms."

As they practiced Ms. Jackson moved around the class giving individual feedback to students. For example, "Melissa, take a second to make sure you contact the ball in front of you," "Nice height on the set James." If she saw that certain points were common to several students she brought the class together to explain. For example, in a class which focused on setting she said, "Don't stand facing the net. Keep your eye on the ball and call for it." In team handball she stopped the game and stated, "You would think it is a hot potato and not a handball! Take your time to make the accurate pass."

While Ms. Jackson used a variety of drills in volleyball; in team handball she used the game situation to focus on the concepts of teamwork, passing, offense, and defense. The students were involved in full court games from the beginning of the unit. Ms. Jackson usually stood in the same place; about half way down the right hand side of the gym. She refereed the game and frequently commented on the students' performance. At one point a call she made was disputed and she replied, "you should pay your officials more!" There was a lot of laughter.

Ms. Jackson was quick to address any negative student interactions. After a goal had been scored in team handball one student said to the goalie, "I can't believe you let a girl get by you." Ms. Jackson immediately spoke with the student at length about the inappropriateness of his comment. On another occasion there was a dispute over the score in a volleyball game and the teams involved continued their antagonism throughout the lesson. At the end of the class Ms. Jackson stressed the importance of maintaining a positive attitude even though you may not always agree with your opponents.

In volleyball the students chose their own groups for both the drills and games. There sometimes was one substitute on each team who rotated in after the serve was lost. In team handball, however, the students formed a long line and Ms. Jackson selected the two teams by asking certain students to "step out" into the middle. She then designated one team to wear the scrimmage shirts. In this unit there were often several students standing on the sideline. Ms. Jackson monitored the rotation so all students had equal playing time.

Throughout the lessons in both units Ms. Jackson carried the set of grade cards with her and made notes as she observed the students participate. The students not taking part in the lesson always stood on the right hand side of the gym. On several occasions Ms. Jackson made it clear that they were to stand rather than sit, and that they could not read a book or do homework.

Ms. Jackson closed each class by gathering the students together in the center of the gym. She usually made a comment on their overall performance and indicated what they would work on in the following class. The students then put the balls and scrimmage shirts away before leaving the gym.

Heather

Heather is currently a senior who is taking additional classes to graduate a year early from Colonial High School. She has long, wavy brown hair and usually wears a baggy, long-sleeved shirt to gym class.

At the beginning of each class Heather sat in the bleachers and waited for the teacher to arrive. She then slowly ran laps for a minute before following the teacher's lead in a routine of stretches.

In the first few volleyball lessons the teacher set up a number of drills to practice setting, bumping, and serving. When the teacher asked the students to form a circle while she explained the skill or drill, Heather was usually standing at the back of the circle watching. She worked with a variety of people when practicing drills, and she usually tried to perform the task the teacher had set. Sometimes Heather looked around to see what other students were doing before beginning the practice.

When the lesson focused on setting, Heather concentrated on trying to set the ball with her fingers as the teacher had demonstrated. In the drills, she tended to rely on a one-handed bump if she was out of position or unable to reach the ball. This was also true in the game situation.

On one occasion when Heather was in the 'setters' position in a game, a guy on her team tried to take the ball when the shot should have been hers. She stood her ground and hit the ball over the net to win the point. The guy then gave her a congratulatory high five!

When she was serving, Heather used the overhand serve, punching upwards with the heel of her hand. She always called out the score before serving. In one game she successfully served three times in a row and when her team won the final point she threw her arms in the air.

Heather missed several lessons in the team handball unit. When she did participate, she walked around the gym and would try to intercept a pass if the ball came close to her. Heather kept the people she was supposed to be defending in her sights but she did not mark them closely. When her team had possession of the ball she would move towards the goal they were attacking. Heather registered her dislike of wearing scrimmage shirts with the comment, "Oh great I get to wear an adorable scrimmage shirt!"

Becky

Becky is a senior at Colonial High School. She has long, straight dark hair which is sometimes tied back and she occasionally wears glasses.

At the beginning of the first lesson in the volleyball unit the teacher took attendance and then asked the students to listen while she explained some groundrules. Becky turned to her friend and said, "Oh God, she's going to talk for an hour now!"

During the warm up Becky jogged slowly around the outside of the gym and then she completed the stretching routine. Becky watched as the teacher explained skills and drills. When the class was assigned a drill she usually stayed on task and worked quietly with a partner to practice the specific skill.

At the beginning of a game Becky often stood at the back of the court and explained where her teammates should be positioned. She watched the play and was usually ready to hit the ball when necessary. In some games, however, she rarely touched the ball at all. Becky's serve sometimes hit the net and she always apologized to her team when this happened. On one occasion her teammate gave the ball back to her and said, "Here you are, try it again."

Becky worked with a variety of students and seemed to have a good rapport with all of them. When she hit the ball really hard and it rebounded back to her from the net, one of her team teased, "A little strong there!" On another occasion she tried to bump the ball but it rebounded off the wall and nearly hit one of her team; again there was a lot of laughter.

Becky missed several classes in the team handball unit, but when she did participate she was very supportive of her teammates. She applauded when her team scored and complimented the goalie on a great save, "Nice job Jay." When Becky played offense she moved parallel to the ball and tried to get free by side stepping and dodging away from her partner. Sometimes she did not receive the ball even though she was in a good position. Becky usually called out the score and she was quick to correct the teacher if there was a discrepancy.

Beth

Beth is a senior at Colonial High School. She has long, wavy red hair which is usually tied back, and she often chews gum.

Beth missed several gym classes but when she did participate she worked with a variety of different students in both drills and games. At the beginning of class Beth jogged slowly around the gym in the warm up and then sometimes chatted with her friends as they all stood in a circle stretching. Beth listened as the teacher gave instructions and worked quietly in drills.

In the volleyball game Beth tended to stand with her hands by her side and watch the play. She was ready to hit the ball if it came towards her, but she did not seem to touch it often. When she served, Beth sometimes pulled her shirt sleeve over her hand. Her serve was fairly consistent and she always called out the score. In one game she won several points in a row as the opponents were unable to return her serve. She seemed very confident (perhaps a little smug!) by the end of the game.

Beth was usually actively involved in team handball and by the end of each class she was breathing hard. As a defender she marked her player quite tightly and tried to intercept passes. When her team had possession of the ball Beth worked hard at losing her partner and getting free. She was often in a good position but her team did not manage to get the ball to her. In one class the teacher called, "Pass the ball to Beth, she's in the shooting lane."

On several occasions Beth collided with other players as they all attempted to reach the ball. Such incidents were usually followed by laughter. At one point though Beth was angry when a guy collided with her and she hit the wall. A foul was called against the guy for excess roughness, and he did apologize, but Beth was obviously upset and told him so.

Nicole

Nicole is a sophomore at Colonial High School. She has shoulder length red hair which is sometimes pulled back in a pony tail.

In gym class Nicole jogged slowly around the gym during the warm up and then followed the teacher's lead in the stretches. She listened as the teacher explained that the class were going to do drills because, "even Olympic teams need practice." Nicole replied, "but this is not the Olympics, this is only gym class."

During a volleyball drill designed to focus on setting, the three front players got a lot of practice. Nicole was standing in the back row, and as her team did not rotate, she did not touch the ball at all. When the teacher came over to see how the group was doing Nicole said sarcastically, "Oh yeah! We're just peachy."

In both drills and games Nicole worked with a variety of different students and her involvement seemed to depend upon the group she was with. In the game situation Nicole always watched the ball. She was on her toes and ready to play but she had a tendency to wait for the ball to come to her.

When she played close to the net Nicole usually faced the ball and her sets were quite accurate. If she was on the back row she tended to shadow the movement of the person in front of her. In one game Nicole served and hit another student. She immediately went over to see if the student was hurt and then gave her a hug.

At the beginning of the team handball unit Nicole did not receive the ball even though she was unmarked and in a good position. She complained loudly, and this led to a class discussion about the number of times the girls got the ball. Later in the unit she showed her frustration again by saying, "I'm sick of guarding Alyssa, she never gets the ball. I hate this game."

Nicole was usually very active in team handball. If her team had possession she would try hard to get free. Sometimes Nicole really fought for the ball and she became excited when her team had the chance to score.

When Nicole was on offense she tended to stand quite close to the goal, but was very reluctant to shoot even when she had the chance. In one class she said "I'm not shooting," and passed the ball for another member of her team to take the shot. Her teammates kept encouraging her to shoot and when she finally did, the ball went straight to the goalie.

If Nicole played on defense she marked her opponent closely and tried hard to intercept the pass. When she was in goal, Nicole watched the ball and moved to cover the bleachers when the opposition tried to score. She was willing to try to stop the ball but she did not want to throw it out from the goal. She became frustrated when the other team scored several baskets because as the goalie there was nothing she could do to stop them.

Tammy

Tammy is a senior at Colonial High School. She has shoulder length dark hair which is usually pulled back away from her face.

In gym class Tammy always hung around with the same group of friends. They ran laps together, practiced drills together, and were always on the same team. There was a good rapport in the group and a lot of joking around.

Sometimes Tammy watched as the teacher explained the volleyball drills, while at other times she would chat with her friends. In one class the teacher used Tammy and her group to demonstrate a particular drill for setting. Tammy had good control of the ball and successfully performed a set when she had the opportunity. She also had the ability to distribute the ball to each member of the group.

In the game situation Tammy had an accurate serve and won several points. She was willing to share her knowledge of volleyball and often explained to her team why they had lost a particular point. Tammy also offered suggestions to a friend who was having difficulty with the overhand serve.

Sometimes Tammy and her team did not seem to take the game seriously. In one class there was a lot of laughter which resulted in the teacher talking to the team about their level of participation. There was also a dispute over the score and the other team seemed very frustrated. Tammy told them, "It's only a game." When the teams had to rotate to another court, Tammy ran over to her friends and they pushed each other as they moved to the next game. They discussed the scoring dispute and how "stupid" it was.

At one point a friend of Tammy's was hit in the face with the ball. Tammy went over to see if she was hurt, and the two of them started to giggle. Tammy tended to laugh if she or someone else collided with another student or mis-hit the ball. When her teammate tried to bump the ball and it went out of bounds Tammy said, "Don't worry about it, it's only gym class."

Tiffany

Tiffany is a senior at Colonial High School. She has long, fair hair and often wears green sweats and a tee shirt to gym.

In gym class Tiffany always hung around with the same group of people. They ran laps together at the beginning of every lesson and stood close to each other during the stretches. The teacher led the stretching component of the warm up, but in one lesson she asked Tiffany to demonstrate a stretch and explain the muscles which were being used. When it was time to divide into groups for drills or games, Tiffany and her friends were always on the same team. There was a lot of laughter in their group.

Tiffany watched when the teacher explained volleyball skills and drills. In one drill Tiffany was in the center of a circle of students and her role was to pass the ball to each person so they could practice setting. One of her friends returned the ball with a good set and Tiffany complimented her, "Nice job Janna." If someone in the circle was not able to return the ball, Tiffany usually gave them another try.

In serving practice Tiffany's underhand serve was quite accurate so she then tried to serve overhand. Tiffany tried twice but did not get the ball over the net, and she then asked her friend for help. On the third try she completely mis-hit the ball and scored a basket. At this point the teacher came over and gave her some feedback about the overhand serving technique.

In the game situation Tiffany watched the ball and sometimes shouted "mine" if she thought she could reach it. On the occasions when she did not call for the ball Tiffany often collided with her teammates and there was a lot of laughter.

Tiffany was willing to offer advice about volleyball skills. One of her friends was having difficulty setting the ball so Tiffany went over to her and said, "Don't hit down, hit up." Tiffany explained how to set and then demonstrated the correct action.

In one class Tiffany complained that the ball was "wicked hard" and she pulled her shirt sleeve over her hand to protect it. Sometimes she only used one hand to hit the ball, but her returns were more accurate when she used both hands.

When it was her turn to rotate out of the game, Tiffany sat on the bleachers and encouraged her team. She shouted to remind them when it was time for her to switch back in to play.

Sylvia

Sylvia is a senior at Colonial High School. She has dark hair which falls just below her ears and she usually wears a tee shirt and white sweats to gym class. Sylvia often wears a bandana to keep her hair out of her eyes and once the teacher commented about the bandanna being a safety hazard. Sylvia replied by saying that it was either the bandana or having her hair loose, both of which were safety issues.

In gym class Sylvia hung out with the same group of people. They chatted together on the bleachers at the beginning of class, ran laps together in the warm up, and were always on the same team.

Sylvia watched as the teacher demonstrated drills and skills. When asked to perform drills she sometimes seemed a little unsure of the task and on a couple of occasions she and her partner watched the other students to see what they were doing before starting to practice. During practice Sylvia stayed on task and tried to perform the specific skill.

In a drill focused on setting Sylvia had a partner who was fairly tall and her sets were not always high enough for him to return. Sometimes her sets went backwards but when she waited for the ball to drop lower she could direct an accurate set. The height of the sets improved throughout the unit and Sylvia received compliments from the teacher, "Nice set Sylvia."

In the game situation Sylvia was supportive of her teammates. She encouraged them when they performed a good shot and if they missed the ball she made comments such as "Don't worry about it." In one class Sylvia was involved in a dispute over the score in a game. There was some antagonism between the two teams and at the end of the lesson the teacher emphasized the importance of smiling back at your opponents.

At the beginning of the team handball unit Sylvia immediately registered her dislike of scrimmage shirts; a sentiment she conveyed each time her team had to wear them! In the game, Sylvia tended to stand on her own and when her team had possession she tried to create a space down the side of the gym. She usually indicated when she was free, but sometimes the ball was not thrown to her. At the end of one class her friend came up to chat about the number of times Sylvia had received the ball in the game.

Sometimes Sylvia walked back and forth in the middle of the gym following the ball but with seemingly little intention of contacting it. She reached for the ball if it came near, but had a tendency not to move her feet. If she received the ball and was within shooting range she usually tried to score rather than pass to someone else who may have been in a better position.

As a defensive player Sylvia marked her opponent loosely but did try to intercept passes. When she was in goal she watched the ball and moved to defend the bleachers. She made some great saves and received praise from the teacher.

Dave

Dave is a tall, fair-haired senior at Colonial High School. In gym class Dave hung around with the same group of people. At the beginning of each lesson they would sit together chatting on the bleachers waiting for the teacher to arrive. When attendance had been taken, Dave and his group of friends would run laps together in the warm-up, practice drills in a small group, and they frequently played on the same team. There was often laughter in the group.

In volleyball Dave watched the teacher as she explained certain skills and drills. When it was time to practice he went to pick up a ball and then helped to organize his group into the drill. During practice, his setting was quite controlled and Dave was able to accurately send the ball to other members of the group. When he was the center of the 'setting circle' he distributed the ball evenly among all the group members and always apologized if his pass was not accurate. At one point when the ball rebounded out of the circle, Dave ran across the gym to retrieve it and then resumed the drill.

In the game situation Dave always watched the ball and was ready for action. He frequently complimented his teammates on their performance and chatted with them about strategy for winning the next point. On occasion, he collided with one of his teammates as they both tried to reach the same ball. This usually happened as Dave was moving backwards and his teammate was moving forwards. The two players would laugh and then remind each other to call for the ball.

Dave had a good rapport with his teammates and also with other students in the class. He pretended to argue with a member of the opposite team about an illegal hit. Both players demonstrated the hit as they saw it and explained their point of view. The exchange was loud, but all in fun.

In team handball Dave was usually very active in the game. When his team had possession of the ball Dave tried hard to 'lose' the person marking him. He would fake a move and then run in the opposite direction, or run down the sideline to get free. If he managed to get into a good position, Dave would call for the ball and move towards it to prevent the pass from being intercepted.

To score in team handball the players had to hit the center section of the bleachers, and Dave would often take a shot on goal. If his shot was saved, Dave immediately ran to guard his opponent. He would jump high to try to intercept the ball, sometimes losing a little control and colliding with either another student or the wall. Any such collisions were usually followed by laughter.

Cathy

Cathy is a sophomore at Colonial High School. She has shoulder length hair and usually comes to gym wearing white sweat pants and a white shirt.

In gym class Cathy hung around with the same group of people. They chatted together in the bleachers before class started, ran laps together in the warm up, and were always on the same team. In the stretching component of the warm up Cathy showed great flexibility much to the amazement of one of her friends. There was a good rapport in the group and a lot of laughter.

In volleyball Cathy watched as the teacher explained skills and drills. When a task had been assigned she usually paired up with the same student and they began to practice the particular skill. In drills which focused on setting, Cathy tended to take the ball too high, almost jumping to reach it. As a result the ball would often go behind her rather than to her partner. At one point the teacher came over to give Cathy some help with setting technique.

In the game situation Cathy was always in the correct court position, but sometimes she seemed hesitant to make contact with the ball. As the unit progressed she seemed to become a little more confident and began to call "mine" if she thought she could make the shot. Cathy kept score during the games and was involved in a couple of discussions when there was a discrepancy.

In team handball Cathy tended to be a quiet member of the team, although sometimes she was aggressive and really fought for the ball. Cathy usually played down the far side of the gym and when her team had possession she moved parallel to the ball. Cathy was often marked closely, but she tried to get free and then stood with her hands in the air if she wanted to receive the pass.

Cathy played in goal several times and made some good saves. In one class she was not rotated out of the goal when offense and defense switched, but a member of her team asked if she would like to change position. Cathy immediately went to play on offense.

Jay

Jay is a senior at Colonial High School. He has short brown hair and usually comes to gym wearing shorts and a tee shirt.

In gym class Jay hung around with the same group of people. They chatted together on the bleachers before class started, ran laps together in the warm-up, and were usually on the same team. There was a good rapport among the group and a lot of joking around. At the end of a volleyball drill Jay looked at someone, went to pass them the ball but at the last minute threw it to another person who was not expecting it. There was a lot of laughter.

Jay also joked with other students who were not necessarily in his immediate circle of friends. He teased a guy on the opposite team for spiking the ball and making an illegal hit. The two of them pretended to be angry, but they were smiling and it was all in fun.

In volleyball Jay watched as the teacher explained skills and drills. At one point she told the students to make sure that they did not hit the scoreboard on the wall. Jay and his group were closest to the scoreboard as they practiced the drills, and the first time he touched the ball it hit the scoreboard!

In the game situation Jay demonstrated an overhand serve which was fairly consistent. During one game he chatted with another teammate and they worked out a strategy to try and win the next point on his serve. They were successful.

In team handball Jay was always involved but his movement in the game varied. Sometimes he would run from one side of the gym to the other and fight to get the ball. At other times he would call for the ball and wait for it reach him. On some of these occasions, the pass was intercepted by the opposing team.

To score in team handball the players had to hit the center section of the bleachers. In one lesson someone asked Jay if he wanted to be in goal and he laughed and said "No." Later in that game, however, he did offer to go in goal and made some really good saves. He received positive comments from the teacher and his teammates.

Later in the unit, the teacher introduced the option of scoring an extra point by shooting a basket. In one particular game Jay received several passes and tried to score a basket each time. He was not successful and the ball tended to bounce off the rim or the backboard. After the third attempt, Jay decided to switch from offense to defense.

Jim

Jim is a senior at Colonial High School. He has short, dark hair and he usually dresses in black for gym. Jim missed several gym classes but when he did participate he hung around with the same group of people. At the beginning of each lesson they would sit together in the bleachers and chat until the teacher arrived. They ran laps together in the warm-up, practiced drills in a small group, and were usually on the same team. There was a good rapport among members of the group.

In volleyball Jim stood and watched as the teacher explained drills and skills but he seemed anxious to move into the game. He was usually energetic and jumped high to block the ball. When he was serving, Jim always called out the score. His serve was fairly consistent and powerful. In the setting position Jim really tried to set the ball to the people on either side of him. When one of his teammates performed an illegal hit, Jim demonstrated the action and explained why it was illegal.

Jim had a tendency to pull his sweatshirt sleeve over his hand and hit the ball with one hand. This technique was usually inaccurate and often an act of desperation. Sometimes Jim would slide across the floor to try to save a point even though another player was closer to the ball.

At the beginning of the team handball unit there was a discussion about how many times the girls in the class received the ball. At the end of that lesson Jim chatted with one of his teammates (Sylvia) about the number of times she had touched the ball during the game.

Jim was very active in team handball. When his team had possession of the ball he worked hard to get free to receive passes. He usually called for the ball and was willing to take a shot on goal if he was in a good position, otherwise he would pass to his teammates. If they scored, Jim sometimes gave them congratulatory high five.

When the other team had possession of the ball, Jim tried hard to intercept passes. Sometimes he had a tendency to follow the ball rather than mark a particular player. On occasion, his enthusiasm led to a lack of control and Jim sometimes collided with other students. In one class the teacher called a foul for contact, "Was not," Jim replied.

When Jim was in goal he covered the bleachers well and made some nice saves. He conceded a goal when the ball went through his legs and he took a lot of teasing from his teammates.

Sean

Sean is a senior at Colonial High School. He is tall with short, dark hair, and he usually wears a baseball cap which he leaves in the bleachers during gym class.

Sean often ran laps on his own in the warm up and then worked with a variety of students in both drills and games. He watched as the teacher explained particular skills, but he did not always practice the assigned task. In one drill the students were supposed to be practicing their setting, but Sean and his partner tried to hit the windows in the top of the gym.

In the game situation Sean always watched the play and was ready to hit the ball when necessary. Sean worked hard to keep the ball in play and he would sometimes slide across the floor to try to save the point. At the net he had good height on his jumps and was often successful at blocking the ball. He also had a strong underhand and overhand serve.

When Sean played in the back court he coordinated plays by calling for the ball or indicating which one of his teammates should take the shot. On several occasions Sean ran towards the net and spiked the ball. Spiking was not allowed in the game and the teacher called a foul, but Sean immediately denied that his shot had been a spike. A good natured debate followed.

Sean had a good rapport with his teammates and also with other students in the class. On numerous occasions students on both teams teased him about illegally hitting the ball. Sean pretended to argue with them, and although the exchanges were loud, they were all in fun.

Sean was often very active in team handball. He fought to get the ball and sometimes a foul was called against him for excessive roughness. Sean tried hard to lose the person marking him, and if he managed to get free Sean called or clapped his hands to indicate that he wanted the ball. If he was in a good position Sean would sometimes take a shot on goal. At other times he passed the ball for one of his teammates to try to score.

When Sean was on defense he tended to follow the ball and mark the person with possession. Sometimes he lost a little control as he jumped to intercept passes, and as a result he collided with other players. Usually such collisions were followed by laughter. At the end of gym class Sean would often jump to try to reach the basketball rim or the exit sign above the door.

APPENDIX K
SUMMARY OF STUDENT BELIEFS

Gym class is not important now or in the future

Gym will be of little help to us in the future and it is not as important as other school subjects. It is, however, a fun break from academic classes because we often get to be with our friends and we do not have to think in gym class. Gym should not be mandatory in high school and it should not be a graduation requirement.

Gym is usually repetitive, boring, and unchallenging. Other than some rules, we do not learn anything in gym that we didn't already know. We learned our sports skills from taking part in activities out of school.

At the high school level the PE teacher's role is more like that of a referee. Drills and instruction are only necessary in the beginning and the rest of the unit should be spent in the game. We learn by playing the game, and gym class should be longer so we can have more time in the game situation. Gym should also be structured so we can take it when we want to.

It's really important to have friends in gym class

Having friends in gym class is really important. They make us feel more comfortable when we have to work in teams or groups. Being with our friends is what makes gym class fun and we can help each other to improve our skills by offering suggestions and hints.

Gym class also allows us to get to know students who we wouldn't usually hang out with. If we're on a team with people we don't know, we have to interact and work together to play the game. Sometimes, however, teamwork is difficult because the guys are reluctant to pass to the girls.

It is important to trust and respect our teammates which can be hard when some people just stand there and do not participate. Gym class should be divided into two groups; the people who are interested and want to participate and those who do not. That way we would get to play with people who want to play and everyone would have their own kind of fun.

APPENDIX L

NARRATIVE STATEMENT OF TEACHER'S BELIEFS

Teacher Beliefs

I believe that my role as a physical education teacher is to create a safe atmosphere in which students feel good about themselves and also experience some degree of success in physical activity. I believe that if a teacher keeps students excited and turned on to the activity, they will pick up the skills as they participate. I see the focus of physical education being much more around the students' self-esteem and how they feel about the activity rather than developing the perfect set in volleyball for example.

I believe in a recreational approach to physical education in which the students are introduced to as many activities as possible. There are no specific skill demands or a rigid skill sequence. I want the students to enjoy the activity so they will pursue it after school and challenge themselves to acquire more skills. I believe that sometimes we have to trade off maximum participation for exposing the students to different activities.

In physical education issues of self-esteem and body image can affect whether or not students enjoy the activity. I encourage students to be positive about their body image and I try to teach about interpersonal relationships, self-esteem and life skills through activity.

Students should be held accountable for treating each other with civility and respect. Each student, irrespective of skill level, should have an equal part in participation and enjoyment of activities and the support of their peers. Physical education should be a safe environment for **all** students. If students choose not to participate within these groundrules, they should take responsibility for that decision. I believe that a teacher should have established consequences for inappropriate behavior, but these should never include being derogatory to students.

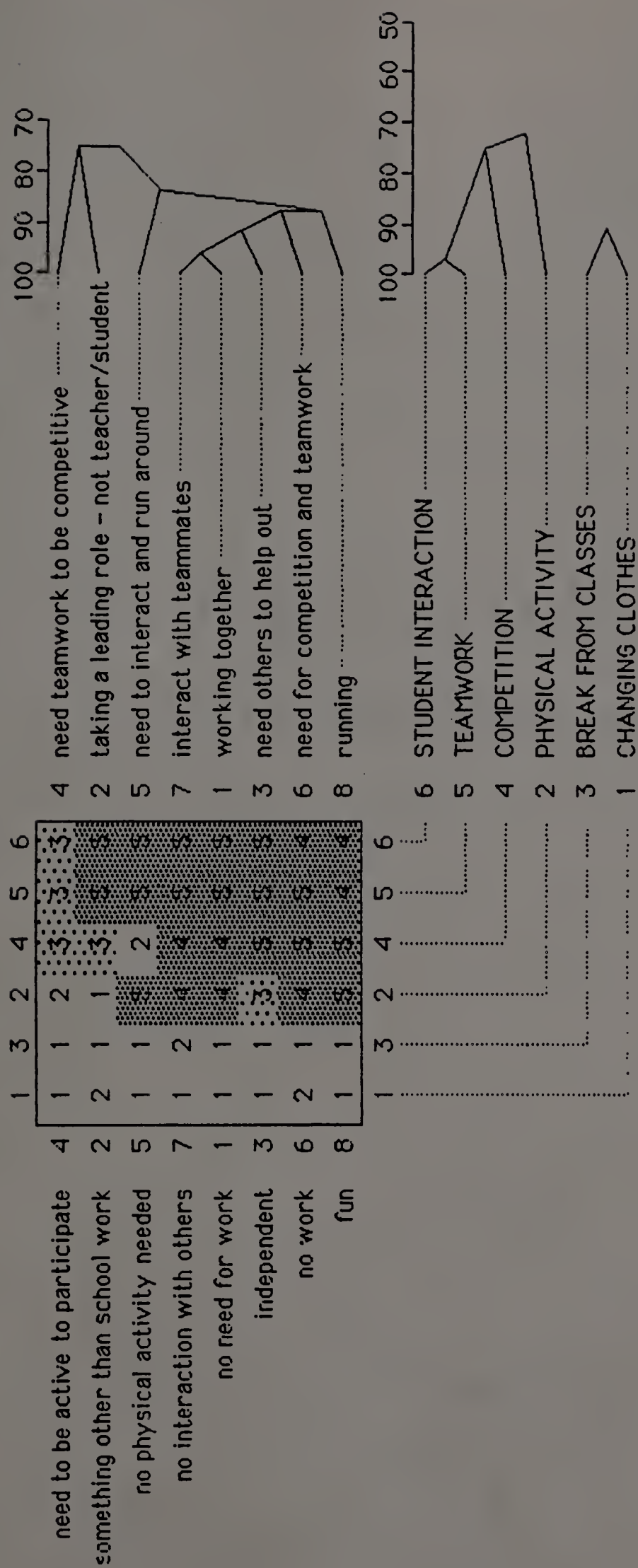
I believe in personally communicating with as many students as possible each class and I try to be sensitive and inclusive with my language. Teachers have a strong impact on students and a flippant comment said in jest can really affect a student's attitude towards physical education.

Physical education should be mandatory for all high school students. Their level of maturity changes so much and if it were an elective I think we would lose some students in their junior and senior years; the time when physical education may become more meaningful and relevant for them. I realize that sometimes physical education is at the bottom of the students' agenda when compared with other issues in their lives. These students often need the most compassion and not the heavy hand.

APPENDIX M

EXAMPLES OF DISPLAY AND FOCUS REPERTORY GRIDS

	1	2	3	4	5	6	
1 no need for work	1	4	1	4	5	5	1 working together
2 something other than school work	2	1	1	3	5	5	2 taking a leading role - not teacher/student
3 need others to help out	3	3	1	1	1	1	3 independent
4 need teamwork to be competitive	4	4	5	3	3	3	4 need to be active to participate
5 need to interact and run around	5	1	5	4	1	1	5 no physical activity needed
6 need for competition and teamwork	6	2	5	1	1	2	6 no work
7 interact with teammates	7	2	4	2	1	1	7 no interaction with others
8 running	8	1	5	1	2	2	8 fun
	1	2	3	4	5	6	
	1	2	3	4	5	6	6 STUDENT INTERACTION
	1	2	3	4	5	6	5 TEAMWORK
	1	2	3	4	5	6	4 COMPETITION
	1	2	3	4	5	6	3 BREAK FROM CLASSES
	1	2	3	4	5	6	2 PHYSICAL ACTIVITY
	1	2	3	4	5	6	1 CHANGING CLOTHES



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